

**REVIEW AND APPROVALS**

**SUPAWNA MEADOWS NATIONAL WILDLIFE REFUGE**

**PENNSVILLE, NEW JERSEY**

**ANNUAL NARRATIVE REPORT**

**Calendar Year 1997**

<u>Thomas T. Keen</u>	<u>6/22/00</u>	<u>Richard D. Dyg</u>	<u>7/13/00</u>
Refuge Manager	Date	Refuge Supervisor Review	Date

<u>S. M. M. R.</u>	<u>7/17/00</u>
Regional Office Approval	Date

## INTRODUCTION

### Location

Supawna Meadows NWR is located along the Delaware River in Salem County, New Jersey. It is approximately ten miles south of Wilmington, Delaware and 35 miles south of Philadelphia. Figure 1 shows the refuge and vicinity.

### History of the Refuge

The presence of the Service in Salem County was initiated by Executive Order 6582, issued by President F. D. Roosevelt in 1934. This Order established the Killcohook Migratory Bird Refuge and gave the Service (then the Bureau of Biological Survey) secondary jurisdiction of the 1500-acre property "...as a refuge and breeding ground for wild birds and animals." The US Army Corps of Engineers retained primary jurisdiction of the area for use as a spoil disposal site in connection with dredging operations on the Delaware River.

Supawna Meadows National Wildlife Refuge was originally proposed in 1961, as the "Goose Pond Addition" to Killcohook. That year marked the beginning of an accelerated land acquisition program by the Service due to the passage of the Wetlands Loan Act, which authorized \$105 million for the Migratory Bird Hunting Stamp Fund for a seven-year period.

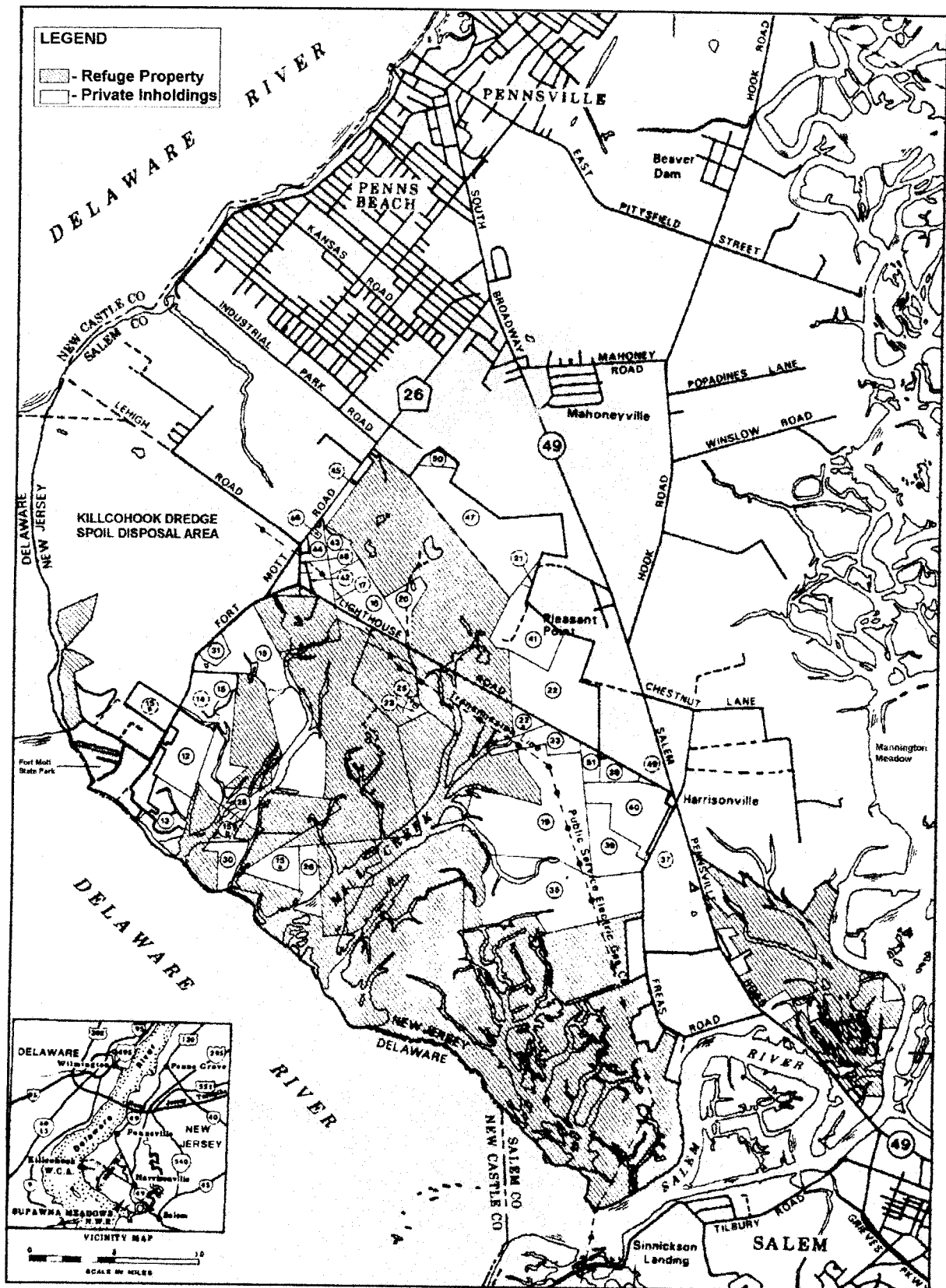
The 1961 Goose Pond Addition proposal included approximately 4,000 acres composed of 45 % marsh, 26 % farmland, 20 % water, 6 % brush, and 3 % timber. Construction of three pools was planned and 850 acres were to be used to produce supplemental food for migrating and wintering waterfowl.

Director Daniel H. Janzen approved the acquisition boundary on March 15, 1962. Negotiations with landowners then stalled and the project was shelved for the next three years.

In 1965, the National Audubon Society and the Philadelphia Conservationists and Natural Lands Trust, Inc. became interested in protecting lands in Salem County. The Philadelphia Conservationists began acquiring land to hold in trust at Supawna Meadows in 1967. The Service agreed to purchase these lands when funds became available, and in 1971, the Migratory Bird Conservation Commission approved purchase of the first 653 acres.

Because of the continual deposition of spoil and the ensuing encroachment of *Phragmites*, Killcohook's value to migratory birds gradually eroded. In 1965, the Service diminished its role in the management of the area by entering into a Cooperative agreement with the NJ Division of Fish, Game and Wildlife that gave the State responsibility for managing

Figure 1. Supawna Meadows National Wildlife Refuge



Killcohook as an upland game management area.

In April 1974, Director Lynn Greenwalt approved the regional recommendation that the "Goose Pond Addition" be separated from Killcohook (then termed a Wildlife Management Area), due to the disparity of habitat quality and management aims between the two (areas). The refuge was renamed Supawna Meadows National Wildlife Refuge and the approved boundary proposed in 1961 was retained.

Forty-two acres were added to the refuge in 1974, bringing the total to 695 acres. In 1981, refuge acreage increased with the purchase of the 1,014-acre Dilworth property from the Philadelphia Conservationists, Inc. Supawna Meadows NWR also includes 6.9 acres that were transferred to the Service and two acres owned by the Department of Commerce, on which the Service has secondary jurisdiction. All tracts purchased by the Service were acquired in fee title. However, the State of New Jersey claims ownership of all lands flowed by tides up to mean high tide, or approximately 80% of the refuge. Table 1 shows the history of land acquisition at Supawna Meadows NWR.

Tract 6, the 1.9-acre property transferred to the Service from the Department of Commerce in 1952, contains the Finns Point Rear Range Light (Lighthouse). The light served as an aid to navigation on the Delaware River from 1877-1950. It was placed on the National Register of Historic Places in 1978.

In November 1987, the Service officially took title to a key, 482-acre tract of open water and marsh (tract 11t) by re-purchasing it from the Philadelphia Conservationists, Inc., which had been holding the land in trust since December 1986.

In December 1990, the Service officially took title to a prime, 335.53-acre tract of marsh and farmland (tracts 18, -I thru -VII,R) by fee title purchase from Elizabeth Yerkes. Also acquired on this tract were several improvements and structures/cemetery of historic significance.

In February 1992, the Service completed acquisition on the 338.14 acre Linski property (tract 100), predominantly tidal marsh. Included in the acquisition were a house, garage, and a shop/storage building.

## **Land Use**

The refuge has the flat terrain typical of the Atlantic Coastal Plain. Elevations on the refuge range from zero to ten feet above mean sea level. The tidal amplitude averages five feet. The predominant soil type is Tidal Marsh, composed of silt and organic deposits one to twenty feet in thickness. The Mattapex-Othello-Woodstown Association is found on upland sites, and consists of poorly to well drained silty soils, with some sands.

Lands in the vicinity of the refuge have been in cultivation since the first, permanent, European settlement was established in Salem County by John Fenwick in 1675. Farming is still the predominant use of lands surrounding the refuge. In the past, diking was developed



to block off the tides so wetlands could be farmed. These dikes required considerable maintenance and storms eventually breached all the dikes around the refuge. The last effort by farmers to dike what are now refuge marshes ended in the late 1930's.

Other traditional activities in the area were shad and sturgeon fishing, boat building and repair, muskrat trapping, and waterfowl hunting. All these activities, with the exception of sturgeon fishing, continue today.

#### History of Land Acquisition at Supawna Meadows NWR.

<u>Date</u>	<u>Acres</u>	<u>Method of Acquisition</u>	<u>Cost (per acre)</u>	
1934	2.0	Executive Order	\$0	(\$0)
1952	1.9	Transfer	\$0	(\$0)
1961	5.0	Transfer	\$0	(\$0)
1971	653.4	Purchase	\$300,000	(\$459)
1974	41.8	Purchase	\$15,700	(\$376)
1981	1,014.2	Purchase	\$154,044	(\$152)
1987	482.0	Purchase	\$84,000	(\$174)
1990	335.53	Purchase	\$415,000	(\$1,237)
1992	338.14	Purchase	\$327,000	(\$967)
<b>Total</b>	<b>2,873.97</b>		<b>\$1,295,744</b>	<b>(\$451)</b>

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## **A. HIGHLIGHTS**

- The U.S. Army Corps of Engineers completed construction of the 15.5-acre wetlands mitigation project.
- Refuge Manager Walt Ford transferred to Eastern Neck National Wildlife Refuge in Rock Hall, Maryland.
- A new informational kiosk and refuge entrance sign were constructed at the refuge's Finns Point Rear Range Light.

## B. CLIMATIC CONDITIONS

Table 1. 1997 climatic data for Supawna Meadows NWR compared to the 30-year normal, 1961-1990 (data from the National Weather Service office at the Wilmington Airport, New Castle, Delaware).

<u>Month</u>	<u>Precipitation</u>		<u>Snowfall**</u>	<u>Temperature (Fahrenheit)</u>			
	1997		30-yr	Min.	Max.	Mean	30-yr Mean
Jan	1.83"	3.03"	2.00	6	65	31.8	30.6
Feb	1.83"	2.91"		21	73	38.9	33.4
Mar	3.49"	3.43"		24	71	43.2	42.7
Apr	1.49"	3.39"	3.00	26	73	50.3	52.2
May	0.82"	3.84"		34	87	58.6	62.5
Jun	1.75"	3.55"		45	95	69.6	71.5
Jul	3.08"	4.23"		56	99	75.9	76.4
Aug	3.67"	3.40"		54	97	72.8	75.0
Sep	1.95"	3.43"		37	85	65.4	68.0
Oct	2.33"	2.88"		30	88	55.6	56.2
Nov	3.24"	3.27"		22	66	43.2	46.3
Dec	2.57"	3.48"		21	58	37.5	35.8
<b>Total</b>	<b>28.05"</b>	<b>40.84"</b>	<b>**</b>				

\*\* Supawna Meadows NWR has been unable to obtain snowfall amounts from the usual source, the National Weather Service office in New Castle (Wilmington Airport), Delaware, located about five miles west of the refuge. The office has been closed, another victim of Federal downsizing, and snowfall amounts are not part of the automated data being sent to the consolidated office in Mount Holly, New Jersey

### C. LAND ACQUISITION

Table 2. Inholding tracts at Supawna Meadows NWR

<u>Tract #</u>	<u>Owner's Name</u>	<u>Acreage</u>
12	Pedrick, Erma	56.83
13	Freas, John F. and Angela C.	42.24
14	Township of Pennsville	3.04
15,a,b	Davis, John W. Jr.	253.43
16	Gant, James P. and Mercina	41.45
17,a	Public Service Electric and Gas	17.92
19	Shidner, James T.	160.00
20	Mecum, James	20.15
21	Lucy, Kenneth and Katherine	3.22
22,a	Mecouch, Clifford and Mike Stanton	109.83
23	Madole, James and Katherine	2.66
25	Madole, James and Katherine	0.38
26	Ayars, David M. Sr.	24.05
28	Loper, Samuel H. Jr.	20.31
30	Dougherty, Joseph B. and Rosemary	22.65
31	Harmer, Mary Ann	9.13
33	Relax Inc. c/o Sol Balick	25.96
35	Butcher, Robert C.	149.56
37	Davenport, Dennis and Tonia	0.40
38	Davis, Ingeborg	9.63
39	Freas, Francis B. (estate of)	46.64
40	Sheer, Paul, Mildred and Grace	62.67
41	Young, Harold H. Jr. and Gail D.	52.24
42	Mapping error, no such lot	
43	Wood, Floyd A. and Doris R.	18.13
44, 45	Whitesall, Harold D. and Viola E.	22.10
46	Alliegro, Joseph Jr. and Grace	0.74
47	Fowser, Mrs. Eric	128.82
48	Bradley, Alan M. and Nina A.	1.72
49	Seeney, James E. and Dorothy D.	0.63
50	Spae, George and Maria	7.50
<b>Total acreage</b>		<b>1,341.54</b>

## 1. Fee Title

November 24: Ceila Hall, Washington Office of Reality, requested information concerning the transfer or purchase of Finns Points Rear Range Lighthouse from the Department of Commerce. After some research, DiDomizio was able to reference a letter in the files which showed the original notice of transfer. The property was owned by the Commerce Dept. then turned over to General Sales Service, once the light was decommissioned in 1950. The General Sales Service then transferred the property to the Fish and Wildlife Service in 1953. The information will help in researching land titles within the Fish and Wildlife Service which doesn't have a clear title of ownership.

## 3. Other

### S. C. Loveland Property

February 25: The Refuge learned that the SC Loveland property is once again for sale. This property is located adjacent to the refuge and is included in the Preliminary Project Proposal as an area desirable for future acquisition. It was first offered for sale in December 1994 (see the following excerpt for background information).

December 10: An auction for the S.C. Loveland property was held by the Philadelphia-based Traiman Real Estate Auction Organization. The 156-acre waterfront property (adjacent to Tract 11) containing a two-story farmhouse, tenant quarters, farm buildings and a historic "gunning club" (recently restored into an office building) and a marina was divided into 8 separate parcels. Separate bids for the 8 parcels totaled \$513,400. The property was then offered in its "entirety". Martin DeRuiter, from Connecticut, offered \$550,000. It appeared that Mr. DeRuiter was the winning bidder. It was later learned that Loveland refused the offer and is placing his property back on the open market for \$700,000. He was originally asking \$1.3 million.

Subsequent to that it was taken off the market for over a year. The property has been divided for sale again in various configurations; from 81.73 acres with various improvements with an asking price of \$945,000; 63 acres and improvements for \$765,000; 35 acres and improvements for \$645,000; 17 acres and improvements for \$595,000; to 46 acres and improvements for \$315,000. While the total acreage has been nearly halved, the asking price has gone up considerably from \$700,000.

July 9: Ford spoke with Dave Lee, Salem County Agent, about plans described by Pennsville Councilman Gant about a 500-head dairy operation moving onto the SC Loveland property on Supawna Road. The farm would border the Refuge's Tract 11k. Lee assured Ford that all the environmental concerns that Ford had were being carefully considered by NJ DEP and the US Dept. of Agriculture's Natural Resources Conservation Service. At the time there were negotiations about the price of the property going on between Loveland and Joe Valin, the individual interested in starting the dairy operation. Lee said that it wasn't a done deal yet, he



put the chances of the dairy operation coming to reality at about 50%. Ford asked Lee to keep him informed on any new developments.

Boundary Expansion Preliminary Project Proposal

January 24: Mary Varteresian, RO Realty, provided the Refuge with a copy of the recently revised Preliminary Project Proposal (PPP) for comment. The revised version is significantly more detailed than the first submission. Minor comments and corrections were provided to Varteresian on 1/28.

February 25: A copy of the revised PPP was received and is included here for the record. Mary Varteresian, RO Realty, re-submitted it to Refuges and Wildlife, WO for review.

PRELIMINARY PROJECT PROPOSAL  
Additions to  
Supawna Meadows National Wildlife Refuge

Introduction

This Preliminary Project Proposal is requesting the approval of an addition of 800 acres of important habitat as additions to Supawna Meadows National Wildlife Refuge in Salem County, New Jersey. This addition enhances the existing Refuge purposes, objectives, and management activities and would support the goals and objectives of the North American Waterfowl Management Plan's Atlantic Coast Joint Venture, the National Wetlands Priority Conservation Plan and the Delaware River/Delmarva Coastal Watershed Ecosystem Team.

Location and Size

The proposed additions encompass approximately 800 acres adjacent to the existing Supawna Meadows NWR, generally extending from the eastern refuge boundary to Route 49 and northeastward from Killcohook Coordination Area to Miles Creek.

Support from Ecosystem Management

Supawna Meadows NWR is within the Delaware River/Delmarva Coastal Watershed Ecosystem. The Team through it's Action Plan has developed a set of important resource priorities or goals. These goals reflect concern for priority species or groups of species, habitat types significant to Service trust resources, and geographic focus areas within the ecosystem. The protection of interior forest areas and grassland habitats, identified in the expansion area, fall within the protection strategies of the team.

The resource priorities for the Delaware River/Delmarva Coastal Watershed Ecosystem are as follows:

1. **Migratory Birds:** Protect, restore and enhance migratory bird habitat and populations, with emphasis on the coastal migration corridor.
2. **Wetlands:** Protect, restore, and enhance wetland habitats, with emphasis on Service-owned wetlands and other areas of exceptional value.
3. **Interior Forests:** Preserve, manage, and prevent further fragmentation of forest habitat suitable for migratory birds, threatened and endangered species, and other interior forest wildlife.
4. **Endangered and Threatened Species:** Protect and enhance populations of threatened, endangered, and candidate species and their habitats.
5. **Interjurisdictional Fish:** Protect and enhance populations of interjurisdictional fish and their habitat.
6. **Service-owned Lands:** Protect, restore, and manage trust resources on Service-owned lands.

### Description of Habitat

The proposed additions consist of 270 acres of tidal wetlands, and approximately 530 acres of upland grasslands, active agricultural land, forested wetlands and forested upland. The marsh acreage consists of wild rice, cattail, and saltmarsh cordgrass with an intrusion of *Phragmites*. The forested areas contain mature canopy of red maple, chestnut oak and black gum with sparsely regenerated understory.

### Major Wildlife Values

Warblers, sparrows and other migratory birds use the forested upland areas as a resting and feeding area during migration and for breeding and nesting during the summer. The National Audubon Society (through the Cape May Bird Observatory) is nearing completion of a Breeding Bird Atlas for Supawna Meadows NWR and the immediate vicinity, including the proposed expansion. Data collected thus far suggests that at least 72 different species of birds utilize available habitat for breeding purposes. This includes several species of concern, as listed in the Office of Migratory Bird Management (OMBM) Publication, Migratory Nongame Birds of Management Concern in the United States: the 1995 List, for Region 5 of the FWS. The abundant northern bayberry shrubs are foraged by thousands of tree swallows in the late summer. Other species utilizing these areas include least bittern, northern flicker, wood thrush, and field sparrow. The American bald eagle is regularly observed in the area. Osprey are known to nest on the Refuge. The northern harrier, is commonly observed in spring and fall utilizing the open fields and marshes.

The marsh, interspersed with tidal creeks and open water, provides critical resting, and feeding habitat for migrating and wintering waterfowl. Waterfowl utilizing the tidal salt marsh area include wood duck, mallards, black duck, pintail, blue-wing teal, gadwall, ruddy duck and Canada geese. Other nesting species include the common moorhen and American coot. The largest heronry on the Atlantic Coast north of Florida is located on Pea Patch Island, in Delaware approximately one mile west of the Refuge. The heronry is comprised of cattle, great and snowy egrets; great, tri-colored and little blue heron; black and yellow crowning night herons; and glossy ibis. All species utilize Refuge lands and the State's Mannington Meadows as feeding ground.

Typical upland species of birds and mammals found in New Jersey use the Refuge and surrounding areas. Common mammalian species on the Refuge include raccoon, opossum, red fox, skunk, mink, weasel, otter, and white-tailed deer. Less common mammals recently documented on Refuge lands are beaver and coyote.

### Management of the Resource

The Refuge will allow some of the agricultural fields to remain in active farming status, stressing best management practices for wildlife. This is consistent with the Farm Program adapted by Refuges, in compliance with the Refuge Manual. The marginal farm lands would be converted back into natural grasslands. The areas infiltrated with *Phragmites* will be

incorporated into the *Phragmites* control plan. Hunting would be allowed on lands, consistent with Refuge policy and state regulations.

The population of deer has greatly influenced the regeneration of the forest understory. The acquisition of existing inholding, in addition to the land associated with the expansion, will allow the Service to have a large enough land base to properly manage the deer population, through its hunt program. Controlling the deer population will allow the understory of the forest to regenerate, making the area suitable for more neotropical migratory birds.

The Delaware River/Delmarva Coastal Watershed Team developed strategies and specific actions for each resource priority. The strategies represent major-issue needs which can be accomplished jointly by various Service offices and their partners within the watershed. The proposed expansion is supported by the Team as described under the following strategies.

Strategy 3 (Interior forest species) under Resource Priority 1 (Migratory Birds) discusses the need to protect habitat for interior forest avian species, especially species in decline. Actions identified under this strategy include: Reduce forest fragmentation and maintain connectivity of habitat for interior forest avian species through Fish & Wildlife Coordination Act assistance on Federal projects and licenses.

Strategy 1 (Migratory birds) under Resource Priority 6 (Service-owned Lands) discusses the need to conduct activities to protect, restore and manage migratory birds and their habitats. Actions identified under this strategy include:

1. Manage and protect croplands and/or grassland to provide feeding and resting habitat for Canada geese, other waterfowl and a diversity of other migratory bird species and wildlife that utilize fields and edges.
2. Manage and protect woodland and brushland habitat to optimize its value to migratory birds and other forest wildlife through regular inventories and surveys and recommendations for active habitat manipulation if appropriate.

### Related Resources

The proposed expansion is located 30 miles southeast of John Heinz NWR at Tinicum. Killcohook Coordination Area, a dredge deposition site for the Army Corps of Engineers' dredge activities on the Delaware River, is located adjacent and to the west. The State manages a 5,500-acre marsh complex in Mannington Meadows, located east of Route 49. The 5,800-acre Mad Horse Creek Wildlife Management Area is approximately 8 miles south of the Refuge. This State-owned area is predominantly tidal marsh and is managed for waterfowl hunting.

### Threats

Current trends in the area indicate a threat of future commercial and residential development. The development of the associated uplands and palustrine wetland fringe will degrade the

habitat's quality by allowing pollutant-laden commercial runoff to enter the refuge complex.

Illegal taking of wildlife is also occurring on lands adjacent to the Refuge. Developers have shown an interest in the agricultural lands that have road frontage. Some of this land is currently zoned commercial/industrial. With the large number of inholdings that exist within the refuge boundary, it is probable that there is some encroachment from residential and agricultural development.

This area is within 30 miles of Philadelphia, Pennsylvania which is a metropolitan statistical area having an estimated population of nearly 5 million and a tourist area receiving more than 100,000 visitors a year.

#### Justification and Funding, Ownership and Type of Acquisition

Acquiring these properties, would protect neotropical migratory bird habitat, as well as provide the critical edge to protect the important tidal marsh of Supawna Meadows. If protected, these additional properties will provide important habitat critical to the existing Refuge wetlands. The addition of these properties have incorporated the lands west of Route 49, to make the connection to the State owned lands east of Route 49, known as Mannington Meadows. This addition will complete Supawna Meadows NWR acquisition boundary and when purchased will function as a manageable unit of the National Wildlife Refuge system.

This area has been identified in the Regional Wetlands Concept Plan under the Emergency Wetland Resources Act and is within a Joint Venture Focus Area for the protection of black duck wintering habitat along the Atlantic Coast under the North American Waterfowl Management Plan. The US Fish and Wildlife Service Wintering Habitat Plan (1988) identifies Supawna Meadows NWR as an important black duck wintering area.

The owners of these properties have expressed a willing interest to sell their properties in fee title to the Service. The Service would use both the Migratory Bird Conservation Fund and the Land and Water Conservation Fund to acquire these lands. The Service would also be interested in discussion with landowners dealing with donations, and conservation and development easements.

#### Initial and Annual Cost

Annual costs would include an increase of the O&M monies at Supawna Meadows NWR, for maintenance, boundary posting, and law enforcement. No increase in FTEs would be associated with the refuge expansion. Acquisition of the subject properties would cost approximately \$500 per acre for wetlands to approximately \$9,000 per acre for uplands. Total acquisition cost is estimated to be \$5,000,000. The approximate Refuge Revenue Sharing payments, based on estimated per acre values, would be \$36,800. An additional \$10,000 will be needed in the Refuge's operations and maintenance cost for the addition.

### Contaminants and Hazardous Waste

Initial investigations indicated no contaminant problems or hazardous wastes in area, however construction debris, and old car parts were found in one area. A thorough background search and a Level I Contaminant Survey will be conducted prior to acquisition.

### Public Attitude

Previous additions to Supawna Meadows NWR have met with favorable public and local government support. General public attitude toward these additions is supportive at this time. Landowners within the proposed expansion have shown a willingness to sell to the Service. Local residents, town officials and the New Jersey State Division of Fish, Game and Wildlife support continued Refuge acquisition and protection of the resources found here.

March 24: Ford received a call from Mary Varteresian regarding the PPP. She said that Bob Streeter, RW, WO, wanted to know how the proposed expansion ties in with other environmental protection efforts in the area. Ford told her that NJ has an aggressive acquisition campaign, using Federal monies for much of it (Salem River Project, which focuses on the Mannington Meadows area). They are acquiring lands where ever available around the Refuge. Tony Petrongolo, NJDEP, Land Use Planner, has given his support for acquisition efforts at Supawna Meadows, including the areas in the PPP.

Mary said that she would convey this information to Streeter. This was the only comment received from the WO since the revised PPP was submitted last month.

May 9: Ford contacted Mary Varteresian, RO Realty, to inquire of the status of the unresolved PPP. Mary stated that she has not heard anything about it since it was submitted to the WO (2/97). She did say that the woman that works on the PPPs in the WO has moved to R-4. People are being detailed to the WO until the position can be filled. Mary will be there for a month detail and will find out first hand what the status is.

May 23: Ford was contacted by Jeff Donahoe, Realty Chief, WO, presently the Acting ARD for Refuges. He had some questions regarding management issues mentioned in the PPP, principally the deer hunt. Ford responded by saying that certain tracts in the PPP receive little hunting pressure and harbor many Refuge deer during the Refuge hunt. If the Refuge expands, a singular aggressive deer management program would likely have a greater impact on the deer population. The fragmented deer management programs at present (Refuge, State, and private) are resulting in a less than an optimum harvest. Donahoe seemed to be satisfied with this answer and said he would sign the PPP and pass it on to Bob Streeter.

July 7: Mary Varteresian, RO Realty, notified the Refuge that the PPP for enlarging the acquisition boundary by 800 acres was signed and approved in the WO on May 27. A memo from Acting FWS Director John Rogers was faxed to Regional Director Lambertson on May 29 authorizing the expansion of the acquisition boundary, a copy of the memo follows on the next page.



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Washington, D.C. 20240

In Reply Refer To:  
FWS/RE97-00069

## Memorandum

To: Regional Director, Region 5

From: ~~Acting~~ Director *John G. Rogers* MAY 27 1997

Subject: Preliminary Project Proposal for Additions to Supawna Meadows National Wildlife Refuge, New Jersey

Your August 1996 proposal to proceed with detailed planning to add 800 acres to the Supawna Meadows National Wildlife Refuge in Salem County, New Jersey, is approved. This proposal focuses on the protection of important wetland and upland habitats adjacent to the existing refuge that support migratory birds and numerous species of resident wildlife. Lands will be purchased with monies from the Land and Water Conservation Fund and Migratory Bird Conservation Fund.

The proposal will result in the protection of important migratory bird habitat, including the tidal marsh of Supawna Meadows, adjacent upland grasslands, forested wetlands and uplands and agricultural land consistent with the Farm Program in compliance with the Refuge Manual. A recently completed breeding bird atlas by the Audubon Society lists at least 72 species that use habitat in the Refuge and its vicinity, including several species of concern listed in the 1995 List of the Migratory Nongame Birds of Management Concern in the U.S.

This addition will complete the Supawna Meadows NWR acquisition boundary and when purchased will function as a manageable unit of the national wildlife refuge system. In an informal agreement between the Region and the State of New Jersey, the Region has agreed to pursue land protection west of Route 49, while the State would pursue land east of that highway. This ties in well with the existing ownership pattern in the area. This proposal would contribute to partnership goals to jointly protect habitat in the area.

The detailed planning process must include compliance with the National Environmental Policy Act and other applicable laws, regulations, and orders. Please forward three copies of the draft and final planning documents to the Assistant Director - Refuges and Wildlife (ARW/RE).



## **D. PLANNING**

### **2. Management Plan**

April 30: The Annual Water and Marsh Management Program was signed and approved by Project Leader Nugent.

May 9: The draft Annual Deer Hunt Program was sent to Project Leader Nugent for comment.

May 16: The draft Annual Waterfowl Hunt Program was sent to Project Leader Nugent for comment.

### **4. Compliance with Environmental and Cultural Resource Mandates**

#### Environmental Audit

February 14 & 18: DiDomizio worked on corrective measures for items found in last year's environmental audit. He purchased and installed some necessary signs, i.e., Flammable Liquids, No Smoking, installed fire extinguishers where needed, and documented waste oil and its proper disposal.

February 19: DiDomizio met with a local contractor to get a bid on sealing the old well in Tract 18 as outlined in the audit. Also, the contractor will provide a rough estimate for drilling a new deep well for the Tract 18 buildings.

February 19: Ford spoke with Dave Washburn, RO Engineering, regarding the previously funded Hazardous Material Cleanup Project. Washburn instructed Ford to write a memo to him asking his office to initiate action on the cleanup effort. Funds available for the cleanup effort total \$13,800.

February 20: Ford sent Washburn the memo as requested. It contained a list of items identified in the environmental audit conducted last year for cleanup. They are:

- Approximately 130 gallons of unknown liquid, possibly Penta Wood Preservative, stored in 3 - 55 gallon metal drums
- Approximately 20 gallons of unknown liquid, possibly Saveall Aluminum Roof Coating, stored in 1 - 55 gallon metal drum
- Approximately 15 gallons of unknown liquid, possibly diesel fuel, stored in 1 - 55 gallon metal drum
- Approximately 13 gallons of Rotenone, stored in 3 - 5 gallon containers

- 1 gallon concrete hardener, stored in 1 - 1 gallon container
- 10 empty 55 gallon metal drums from unknown sources

February 25: Ford reviewed and approved the project specifications as provided by Yee, RO Engineering. The specifications are similar to those used in hazardous material cleanups completed elsewhere in the Region.

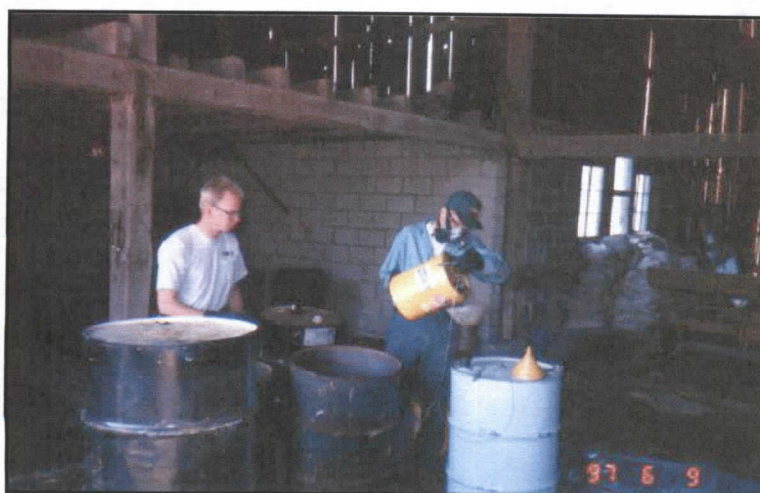
February 26: An acquisition request was submitted to, and approved by Project Leader Nugent to release the funds (\$450) necessary to cap and seal the abandoned well located in Tract 18. A bid was received from D'Agostino Well Drilling, Inc., Bridgeton, NJ, to supply materials and labor to seal the old well according to New Jersey Department of Environmental Protection regulations.

April 23: Joe Madrak, Jr., TIER (Target, Investigate, Evaluate, Remediate), Downingtown, PA, arrived at the Refuge to assess the material identified for cleanup in the course of completing last year's environmental audit. The project is open for bids at the present time. No other company has expressed an interest, to the Refuge, in placing a bid.

May 16: The Refuge received word from CGS that a Notice of Award was given to Tier DE, Inc., Downingtown, PA, for the removal of hazardous waste. The total amount of the winning bid was \$9,215. The award date was May 12.

May 27: Preconstruction phone conference was held between Teir, CGS officer Murphy, and R.O. Engineer Yee. Topics discussed were safety issues, and a notice to proceed date of June 2, 1997.

June 9: TIER arrived on site to begin the hazardous waste cleanup project.



(Photo: DiDomizio)

Are you sure this is the way to make martinis?

The suspected penta wood preservative and diesel fuel was transferred to different containers and left on site. The lesser quantities of material, the empty drums, and the suspected roof coating were removed from site. The only reason that the roof coating material was removed is that it had the consistency of tar and the transfer to another container was impossible. Transfer of the material to different containers was essential due to the rusted condition of their present containers.

June 27: The Refuge received word from Dave Washburn, RO Engineer, that the Refuge will need to apply for an EPA ID# for TIER to legally dispose of the hazardous waste. Approximately 1,000 pounds of the waste is considered "acutely hazardous", having dioxin-forming properties. The material in question was labeled as penta wood preservative.

July 1: A request for an EPA ID# was sent to the Regional EPA Office in New York. The ID# is required for the contractor to dispose of the toxic waste recently identified as having dioxin.

August 5: TIER completed the hazardous waste cleanup project that was initiated on June 9. At that time the suspected penta wood preservative and diesel fuel was transferred to different containers and left on site. The lesser quantities of material, the empty drums, and the suspected roof coating were removed from site. Transfer of the material to different containers was essential due to the rusted condition of their containers.

The containers were transferred to Pollution Solutions of Vermont, Inc., Williston, VT. The material was described as 165 gallons of liquid hazardous waste containing Pentachlorophenol, and 55 gallons of liquid flammable waste containing Toluene and Xylene.

A visual inspection of the ground beneath the drums was done by TIER personnel at the time of material transfer on June 9. They stated that they were confident that no hazardous waste had escaped from the corroded containers and that there was no soil contamination from the identified containers.

September 2: DiDomizio received the official completed hazardous waste manifest from R.O. Engineer Rich Yee with all of the proper signatures. This is in conjunction with negative finding number 52571.96.13 of hazardous waste management disposal of five 55 gallon drums of Penta-Seal wood preservative and 13 gallons of Rotenone (Pesticide).

September 8: DiDomizio received the official reply from Atlantic Electric on transformers owned by them and located on the refuge. Negative finding number 52571.96.18 of the audit stated that any transformer on FWS property be identified as if it contains PCBs or not. The response from Atlantic Electric is that all transformers should be considered to have PCBs in them.

#### Salem River Mitigation Project

January 9: The Refuge received word from the ACE that \$500,000 of unused funds from another project was available for them to use in completing their stalled out project on

Supawna Meadows NWR. The only proviso being that it must be used in FY97. They had a contractor in mind for the project and negotiations would commence very soon. The ACE wants the project completed by June 1 so it won't interfere with the natural revegetation process.

January 28: Lee Phillips, Civil Engineer, ACE toured the stalled mitigation site with Linda Toth, Contracting Officer, ACE, and representatives from DEX Inc., General Contractor. Just when it appeared that things would finally be moving forward again with the problematic mitigation project, another kink developed. The bonding company for the former contractor, U.S. Fire Insurance Company, appeared to be "in the toilet". All telephone calls, and correspondence from the ACE to them was left unanswered for several months. The subcontractors of the previous contractor are still unpaid for work they did. Now however, they have come forward at this late date to complete the project, just days before the ACE intended to sign with DEX to complete it. Phillips felt that Dex had a slight advantage over the bonding company. Dex thought that they could complete the project by June 1, the ACE imposed deadline, the bonding company needs more time to find a contractor that could do the job. However, negotiations are ongoing between the ACE and the bonding company, anything could happen at this point.

February 21: Ford called Lee Phillips, Civil Engineer, ACE, for an update on the stalled project. Phillips said that he wasn't privileged enough to have all the information but he did know that the ACE negotiated a contract with DEX Inc. for nearly \$750,000, the problem being that there wasn't enough money in the Philadelphia District Office to pay that amount. There was money available from outside the district, but he didn't know when it could be transferred to the local district. There was talk of splitting the contract to utilize existing funds and allow the contractor to commence work immediately while the ACE transfers funds to cover the shortfall. Phillips didn't know the amount of the shortfall. DEX Inc. still says that they can complete the restoration work by June 1, if they are allowed to begin work soon. Meanwhile the bonding company is still trying to convince the ACE that they are willing and able to complete the project, but not by June 1.

March 17: Ford attended a Preconstruction Meeting with the ACE, and DEX Inc., Berlin, NJ, at the ACE's Southwest NJ Office in Bridgeport. DEX will be completing the ACE's long suffering wetland restoration project on the Refuge. The notice to proceed was to be sent out on March 18. The project is to be completed by June 9, barring any weather delays. Ford warned DEX that they may have trouble hiring subcontractors because many of them in the area were never paid when the other company folded and the bonding company refuses to recognize their claim. They said that they were aware of it and made plans accordingly (why their bid was somewhat higher than expected). ACE personnel have never said exactly what the bid price is, only that it is around \$750,000.

March 31: DEX was on site setting up an office trailer, port-a-jons, and silt fences. The weather was not cooperating as it was snowing heavily the entire afternoon.



(Photo: DiDomizio)

I can dig it!

April 4: Ford notified Beth Brandreth, ACE, Environmental Resources Branch, about the serious lack of environmental safeguards at their mitigation site. Shortly thereafter Ford was invited to a meeting by ACE personnel from the Construction Branch to discuss the environmental issues. ACE personnel attending the on-site meeting were: John Roche, Resident Engineer and Administrative Contracting Officer; Ray Morgan, Project Engineer; and Tom White, Construction Inspector.

Items that were covered and where corrective action was requested from the ACE were:

- 1) Vehicle and construction equipment were not authorized in the field between mitigation sites B and C, severe damage was occurring to the field and threatening any cultural resources located there. If they needed continued access to the area they would need to install a temporary road with a geotex fabric underlay. Their response was that they were done working in there. No response was given as to how they planned to remove the pumps and port-a-dam that were installed via their incursions.
- 2) A parking area needed to be established where the DEX, Inc. employee's vehicles would be parked. The parking area would need to have the geotex fabric underlay. Vehicles would be restricted to approved road surfaces only. Their reply was that they would do everything that was requested.
- 3) Appropriate measures must be taken to assure that no diesel fuel will spill from their supply tank (set up near their office trailer). This, too, they agreed to.

April 9: The previously mentioned items were monitored for several days. There was little or no effort put forth to correct them as requested during the April 4 meeting. Ford contacted Brandreth, ACE, Environmental Resources, and requested ACE oversight to correct the



deficiencies.

April 11: A meeting was held between ACE personnel, DEX Inc., and Ford. A memo from Pasquale, Chief, Environmental Resources, to Roche provided a summary of the meeting and outlined required actions.

April 25: Another meeting between the ACE, Dex Inc., and Ford was held at the mitigation site. While most items that were discussed during the April 11 meeting had long since been resolved, one thorny issue remains: vehicles driving in an area outside of the contractor's work limits. This area was off limits, primarily to protect cultural resources on the site found during the ACE's archaeological survey. In addition to potential damage to cultural resources, their vehicles have caused significant vegetation destruction, soil compaction, and created large ruts in the soft ground. Brandreth informed them that they must halt all vehicle traffic in that area or install a temporary road with the appropriate safeguards for the cultural resources. Morgan, Project Engineer, stated openly that the ACE will need to pay the contractor more money if they expect them to build a temporary access road. This turned into a lively debate between several ACE personnel that eventually moved outside the office trailer. One of the comments was..."you might as well hold open your pocket and have the contractor move in so he can take as much money as he wants!" The contractor has since estimated that it will cost \$50,000 to build a temporary access road approximately 550' long. It seems that DEX got the message from meeting. Why Morgan (and Roche) believe that the ACE needs to pay them for this is a mystery to many. The ACE's site plan clearly states that the area is off limits to all work activity. This is reinforced with the agreed upon Special Use Permit issued to the ACE..."equipment and personnel are confined to the work site areas previously identified in the site plan..." The negotiations for access to the areas in question should have been hammered out prior to awarding the contract.

May 1: The ACE's Resident Engineer for the Southwest New Jersey Office has finally heard the message loud and clear; no contractor work activities are allowed outside of the previously approved work limits! That message was delivered to him by George Steinrock, Project Manager, during a conference call with a number of ACE personnel participating.

May 20: An on-site meeting was held with ACE personnel; Beth Brandreth, Ray Morgan, and Tom White; Xavier Wong, President, DEX, Inc.; and Refuge Manager Ford. The main topic of discussion revolved around areas needing rehabilitation once the mitigation work is complete. Ford presented Morgan a letter that outlined the types of grass seed desired and a seed source. The request was met with no resistance. All areas needing rehab work were identified and delineated on aerial photos that were possessed by DEX.

June 5: An on-site meeting was held with ACE personnel from their Construction, Contracting, and Environmental Branches; DEX, the construction contractor; and Refuge Manager Ford. The meeting had little substance other than it provided the people from the Corps' Contracting Branch to see the project that they have been working on. Once the personnel from contracting departed from the site the remaining participants reviewed what was required for rehabilitation of all the disturbed areas, i.e., the entrance road, site access

roads, and the office trailer/vehicle parking area.

DEX informed Ford that they had purchased the grass seed as he had previously recommended. Ford suggested that they consider contracting the rehab work out to a local farmer, someone that would have the necessary equipment to work the soil and seed the grass in an appropriate manner. DEX agreed that was a good idea. Ford offered to assist them by way of contacting local farmers that he knew. Two farmers were subsequently contacted, both claimed that they had enough work and weren't interested in more. Another individual that does landscape work was contacted, he expressed an interest and then failed to view the area and discuss specifics. Finally, a fourth individual was contacted (another local landscaper) he submitted a bid of \$4,000 to rehab about 4 acres. DEX has decided that it would be prudent to rent the necessary equipment and do it themselves.

June 13: ACE informed DEX that the elevations in the 3 mitigation sites were tentatively approved after the recent survey. Final confirmation should be forthcoming in next week, after the survey points have been verified by computer. DEX should make final plans for demobilization and rehabilitation.

June 18: DEX received word from the ACE that the elevations in site A was OK and that they could remove the port-a-dam to restore tidal action in the area. By the week's end it was learned that sites B and C were also confirmed having the proper elevations. Demobilization was then begun in earnest.

June 25: Removal of the temporary access roads was initiated in Site A. The stone that was being removed from the roads was being spread on the main entrance road to the tract.

July 18: The ACE's mitigation project is finally finished!!! Final inspection of the work site took place with representatives from DEX Inc. and the ACE, Nugent and Ford represented the Refuge. Final total acreage for the 3 areas excavated remained at 15.6 acres. The Corp's was pleased with the end result, as were Refuge personnel. The quantity of desirable plants seen returning naturally to the restored areas was very encouraging. The ACE is responsible for monitoring the sites for 5 years post-construction, including plant surveys. Wildlife utilization of the area has also apparently been enhanced, based on casual observations of shorebirds and waterfowl presently using them.

The contractor is still responsible for rehabilitation of all disturbed upland areas that occurred as a result of their excavation activities. The soil is to be worked up and seeded into a warm season grass mix, selected by Refuge personnel to have substantial wildlife benefits. Due to lack of sufficient ground moisture and the optimum planting time being past, the grass will not be seeded until a more appropriate time.

The final inspection only revealed a few items that needed to be removed (debris or trash). To summarize, it looked real good!

October 23: Dex Inc. began the rehabilitation of the disturbed upland areas in Tract 18.

Initially Dex Inc. underestimated the amount of soil compaction on the site and the original equipment brought in wasn't heavy enough to properly break into the soil. ( They were hardly scratching the surface of the sites with the equipment.) Maintenance Worker DiDomizio brought the problem to the attention of the foreman of Dex Inc. He agreed the work being performed wasn't as outlined in the contract. Dex Inc. reevaluated their equipment selection and by midday had the proper equipment to begin working again. Plowing and disking of half the sites was completed by day's end.

October 24: All access roads and staging areas of the sites were plowed, disced, culti-packed, and seeded by the end of the day.

Dex Inc. used the seed mix guideline established by former Resident Manager Ford. The mix consisted perennial ryegrass, camper little bluestem, shelter switchgrass, and Niagra big bluestem.

November 3: Army Corp of Engineers' Beth Brandith called for an update on the final phase of the project. DiDomizio told her the preparation and seeding of the access roads and staging area of the site was completed on October 24, as planned by her office.



(Photo: US Army Corps of Engineers)

And then there were wetlands



## 6. Other

### Pea Patch Island Special Area Management Plan

April 2: Ford participated in the "Strategy Developing Workshop" for the Pea Patch Island Special Area Management Plan. Ford worked with the group developing strategies for Oil Spills and Industrial Accidents. Ford drafted a strategy for developing a public outreach component to educate the public about the important heronry on Pea Patch Island and potential threats to it by oil/industrial spills and accidents. He also drafted a strategy for developing a spill contingency plan for the Salem River/Mannington Meadows area. A plan does not exist at the present time, mainly due to the fact that tidal currents move so rapidly (7 knots); contemporary booming methods are deemed something less than optimum in such currents. Ford suggested that booming specialists make recommendations to NJ DOT regarding their plans to build a new bridge over the Salem River on Rt. 49. The planning phase for the bridge will continue through 1997. Permanent anchor points for boom placement could be incorporated into the bridge design. Ford tackled the problem of drafting a strategy for the Salem River area because of 2 reasons: a spill in the vicinity would have a direct impact on Refuge holdings; no one with expertise in booming was present at the meeting to draft a strategy. Those strategies that were drafted early in the process are more likely to be fleshed out later and thereby enhance their chances of being acted on. Only a select number of strategies will make the final cut as worthy or doable at the April 25 meeting.

## **E. ADMINISTRATION**

### **1. Personnel**

#### Awards

January 29: DiDomizio was formally recognized with an On The Spot Award for his efforts in overseeing the Tract 11 dike rehabilitation project come to a successful finish.

#### Drug Testing Program

February 3: DiDomizio submitted the necessary papers in accordance with The Omnibus Transportation Employee Testing Act of 1991 (Public Law 102-143). This action places him on the random alcohol and drug testing program required for individuals with safety-sensitive positions in the motor carrier industry.

February 28: DiDomizio was notified of his selection for a random drug and alcohol test for the purpose of maintaining his CDL. He was given 2 hours to report to the designated testing site, Medical Center of Delaware, Occupational Health Service, Wilmington, DE.

August 6: Ford submitted a urine drug test as required for his reassignment to the ROS position at Eastern Neck NWR.

#### Personnel Actions

July 16: Ford was notified of his selection to the Asst. Manager position at Eastern Neck NWR, Rock Hall, MD. Ford will begin his duties there on August 31. He has been at Supawna Meadows since June 14, 1992, and has enjoyed nearly every minute of it, but felt that it was time to move on.

August 30: Walt Ford ended his five-year stint at Supawna Meadows N.W.R. and laterally transferred to Eastern Neck N.W.R., Rock Hall, MD. Walt will be remembered for his dedicated service; though staffed at a "custodial level", he was able to maximize benefits to the refuge via the maintenanceman volunteers and interns. During Walt's tenure many public use/management programs were enhanced, i.e., Open Lighthouse Days, waterfowl/deer hunts, *Phragmites* control, and wetlands restoration. We wish Walt the best as he slowly moves in his desired direction... West.

The Resident Manager's position remained vacant through December 31.

### **2. Training**

January 7 - 10: Ford attended S-205, Fire Operations in the Urban Interface, in Rapid City, SD. The class was given by the FWS, Region 6. Classroom instructors were from FWS, NPS, and the Rapid City Fire Department. The class was very informative, providing a clear

picture of the complexities and methods used during wildfire suppression efforts in the urban interface.

February 13 - 14: Project Leader Nugent and Ford traveled to the RO for ICS 100 and ICS 200 training for Field Response Coordinators. The Incident Command System (ICS) is currently being incorporated into spill response on all levels, i.e.; state and federal. The training was conducted by RFMO Carter, and the US Coast Guard.

March 11 - 14: Ford attended the Region 5 Projects Leader Meeting in Baltimore, MD. The meeting's theme was creative leadership. The week's highlight was the tour of Patuxent Research Refuge and a banquet held at the refuge's conference center. Remarks were given by John Rogers, Acting Service Director, and Don Barry, Acting Assistant Secretary, DOI, Fish and Wildlife and Parks.

### **3. Ecosystem Management**

February 11 - 12: Ford traveled to the Wetlands Institute, Stone Harbor, NJ with Project Leader Nugent for a meeting with the Delaware River/Delmarva Coastal Ecosystem Team. Agenda items included updates on the Southern New Jersey Landscape Project; 100-on-100 outreach campaign; Results on xantham gum project; Results of the team leader/ecosystem evaluation meeting; Action items from the 10/7-8/96 meeting.

Other topics included: - Delaware Bay Estuary Project's future  
                                   - Prime Hook NWR land acquisition needs  
                                   - Review of project proposals and rank

One item worth commenting on is that the team decided, by consensus, that all field stations should contribute approximately 0.2% of their budget to be used for completing the Team's focus projects. Not all team members were able to contribute the entire 0.2% but everyone gave what they could.

November 21: DiDomizio received the ecosystem evaluation forms from Ohio State University.

November 28: DiDomizio completed the evaluation of ecosystems.

### **6. Volunteer Program**

#### General

January: Alex Linski volunteered a total of 22 hours for the month. Linski mowed around the Tract 100 dike, repaired areas where muskrats have burrowed into the dike, and assisted DiDomizio with maintenance on the Tract 18 garage.

February: Alex Linski volunteered a total of 87 hours for the month of February. Linski

helped complete the wood duck box preparations and assisted with general maintenance around the refuge.

February 24: Volunteer Judy O'Ship erected bluebird/tree swallow boxes on the refuge with intern Tracy Stites. O'Ship volunteered a total of 5.5 hours for the month. They erected 18 bluebird boxes in Tract 18 and 2 in Tract 11 with another 8 boxes to be placed in Tract 11 at a later date.

March: Linski volunteered a total of 88 hours for the month. Time was spent on repairing the wood jointer, repairing an overhead garage door, erecting chain link fence at the lighthouse, doing repairs/improvements on the Tract 18 entrance road, and installing predator guards on wood duck boxes.

March 8: Judy O'Ship worked 3 hours for the month placing blue bird/tree swallow boxes around the Tract 11 impoundment.

April: Alex Linski worked 90 hours during the month. His tasks consisted of helping to construct the kiosk; readying the mowers for the season; and other miscellaneous maintenance jobs.

May: Alex Linski volunteered 28 hours this month. Alex assisted on the new kiosk, mowed in Tract 18, conducted wood duck nest box check with other volunteers.

May 13: Michelle Goode, Pittsgrove, NJ, began volunteering at the Refuge during her summer break. She is a student at the University of Maine, enrolled in the Wildlife Ecology program. She will begin her Sophomore year this fall. The University of Maine rejected her proposal to be placed here as an intern and earn college credits. At the present time she plans to volunteer about 12-16 hours/week.

May 15 - 30: Michelle volunteered 45 hours for the remainder of the month. Michelle mowed the lighthouse lawn, helped with mulching the saplings in Tract 18, and assisted refuge staff with daily maintenance and biological tasks.

June: Alex Linski volunteered a total of 96 hours for the month. Linski mowed, repaired garage doors, checked wood duck boxes and repaired guards on wood duck boxes. Linski also completed various maintenance tasks. Volunteer Michele Goode painted and added displays to the new kiosk at the lighthouse, banded geese, cleared over hanging branches from patrol roads and assisted staff with daily tasks. Michele volunteered a total of 136 hours. Drew and Stacey (Drew's sister) McQuiston volunteered a total of 36 hours together for the month. They completed the wood duck box check and banded geese.

July: Alex Linski volunteered a total of 45 hours for the month. Alex made brackets for supporting predator guards on wood duck boxes, mowed lawns, caulked around the Tract 100 house and built a dolly for the refuge slip-on fire pumper. Michele Goode recorded salinity and water depths in the Tract 11 impoundment, installed metal brackets on wood duck

boxes for the predator guards, placed rip rap, mowed around the trees in the Tract 18 shelter belt, assisted with building ditch plugs in Tract 11d, gathered statistical data of the mid-season check for the wood duck box program. Michele volunteered 72 hours for the month. Drew McQuiston began the final wood duck box check and seeded grass around the new kiosk at the lighthouse. Drew volunteered a total of 24 hours for the month.

August: Drew McQuiston volunteered a total of 40 hours for the month. Drew assisted in the ditch plug work at Tract 11, conducted part of the final wood duck box check for the year and assisted with general maintenance. Volunteer Linski mowed in Tract 18, erected a 2 rail wood fence along the parking lot in Tract 18, tended duck traps in Tract 11d, repaired the inlet water pipe in Tract 100 and assisted with general maintenance. Linski volunteered a total of 100 hours for the month. Michele Goode volunteered 44 hours for the month. Michele mowed the lawn at the lighthouse, changed display's in the LH kiosk, set up and prebaited duck traps, maintained the trees in the Tract 18 shelter belt. Michele completed her summer volunteer position and heads back to college in Orono, Maine. She was a pleasure to work with, always upbeat and dedicated to completing any and all tasks assigned to her. She should be successful where ever fate takes her.

September: Alex Linski mowed in Tracts 100, 18 and 6, he applied a second coat of roofing cement on the Tract 100 garage, assisted DiDomizio in Goose Pond with sign posting for the upcoming duck and goose season. Linski also taught Maintenance Worker DiDomizio how to make repairs on aluminum boats. He volunteered a total of 57 hours.

October: Alex Linski and Jonathan Slusher winterized equipment, checked area safety zones, set up the hunter orientation room and assisted DiDomizio with maintenance tasks. Linski volunteered 56 hours and Slusher volunteered 42 hours for the month.

November: Volunteers Alex Linski and Jon Slusher repaired the blind at the impoundment, cleaned and put away duck traps, mowed in Tract 18, prepared the hydro-ax for the next operator, sharpened the blades for the refuge mowers, added new doors to the fuel building and put new lights in the storage building. Linski also repaired the sink in the Tract 100 house. Linski volunteered a total of 119 hours and Slusher volunteered 63 hours in November.

November 6: New volunteer Robert Simmons had a refuge tour today. He has an environmental degree from the University of Delaware. Simmons is interested in maintenance and biological projects.

December: Alex Linski completed the electric work in the storage building, returned the items borrowed from Heinz Refuge for the shotgun hunting orientation, insulated the water pump in Tract 18, and mowed the impoundment sides in the Tract 100 area. Linski volunteered a total of 113 hours for the month.

December 1,9: Jonathan Slusher assisted with maintenance tasks on the refuge. Jon volunteered a total of 10 hours for the month.

### Lighthouse Volunteers

January 13: Betty Husarik notified Ford that she will be handing over most of her volunteer coordinating responsibilities to Irv Willadsen. Betty has offered her position to anyone interested in taking it for several years, Irv is the first to take her up on her offer. Betty will however, keep a hand on the reins to make sure things go smoothly.

March 17: The annual organizational meeting was held at Ft. Mott State Park. The meeting was chaired by Ford and attended by DiDomizio, McQuiston, Ft. Mott Employee Bjornson, 2 members of the Friends of Ft. Mott group, and 20 Lighthouse Volunteers. Topics covered during the meeting were: volunteer work schedule for the open houses and special occasions, discussion of new lighthouse kiosk soon to be erected, introduction of the new volunteer coordinator (Irv Willadsen), and a review of responsibilities of a Lighthouse Volunteer. Ford also took the opportunity to brief them on developments in Washington, as it pertained to HR 511 and HR 512 and the Administration's position on the bills as given by Secretary Babbitt. The meeting was concluded with a slide presentation on the East Point Lighthouse, Heislerville, NJ, by Carol Reilly.

April 8: Only 2 volunteers showed up for the annual spring cleaning of the lighthouse. The date was mutually agreed upon at their annual organizational meeting, on March 17, as a good day for the clean up. Needless to say, most of the clean up was completed by Refuge staff and other volunteer labor.

May: Five volunteers assisted Refuge staff in making the 4 class trips to the lighthouse a success. Six volunteers helped during the regular open house on May 18.

May 24: Five lighthouse volunteers took advantage of the offer given by Project Leader Nugent for a tour of the John Heinz NWR. The tour lasted about 2 and 1/2 hours and was given by Nugent.

June 15: Susan Humphreys became the newest lighthouse volunteer to join the team.

July 15 & 17: Volunteers that assisted with the NJ Aquarium Day Care kids were: Betty Husarik, Irv Willadsen, Susan Humphreys, and Doris Humphreys.

September: 9 members volunteered 32 hours for the month.

September 27: The annual lighthouse volunteer pic-nic was held at the Tract 18 maintenance area. The volunteers also used this time to show previous Manager Walt Ford their appreciation for his time and dedication to them. The volunteers made a cake for him and gave him some lighthouse gifts. 35 people attended the pic-nic made up of volunteers and their families as well as refuge staff and their families.

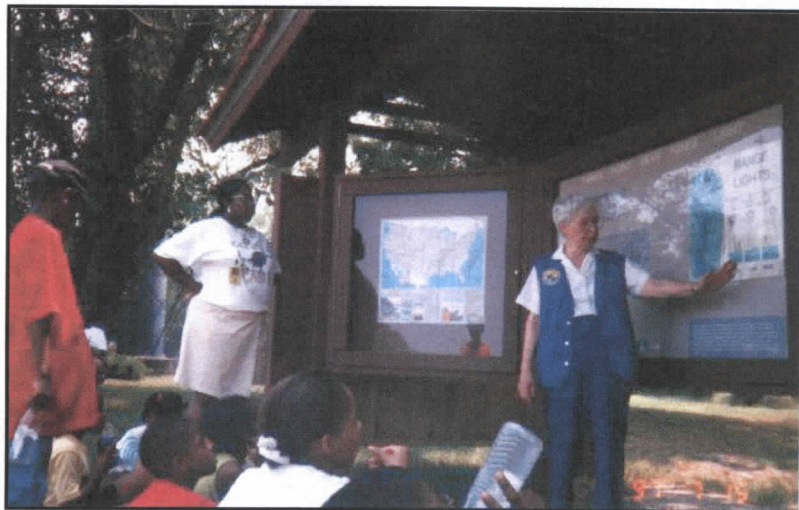
October 22: Betty Husarik gave a presentation on the lighthouse history to two home study students.



November 17: The annual fall meeting of lighthouse volunteers was held at neighboring Fort Mott State Park. Guest Speaker James Gowdy presented a slide show on "Range Lights of the Delaware River". The slides and information concerning the subject was well researched and very fascinating for staff and volunteers. Some of the original range lights are still in existence from the late 1800's, but most have been replaced by modern day range lights with solar power and are now completely automated except for periodic maintenance. It was interesting to see the contrast of range lights from those of the past to the present day lights.

November 23: A thank you letter was sent to special guest speaker James Gowdy.

December 13: Four volunteers conducted a special open house that lasted 1 and 1/2 hours.



(Photo: DiDomizio)

Like the Range Light, Volunteer Betty Husarik guides the way

#### Student Conservation Association Intern Program

January 27: The Refuge received 3 applications for the intern position scheduled to start in mid-March.

February: A total of 3 applications for the SCA Intern position was received from SCA on January 27. By the end of February all 3 applicants had declined the offer to intern at Supawna.

February 26: Ford was informed that former High School Intern Drew McQuiston, Heinz NWR, would possibly be interested in the SCA position.

February 28: Ford offered McQuiston the SCA position after describing to him what it entailed. Drew accepted the offer and will start on March 10. SCA was notified of the selection and will forward paperwork to Drew to formalize the selection and authorize

payment of his volunteer stipend.

March: Drew McQuiston worked a total of 104 hours for the month. His 12 week term began on March 10. Drew's projects consisted of cleaning the lighthouse, working on the lighthouse fence, helping with the Tract 18 road repairs, assist DiDomizio with auto repairs, and care for the shelter belt in Tract 18. Drew also attended the Lighthouse Volunteer meeting and the staff/safety meeting.

April: Drew McQuiston assisted with the woodcock survey, banding screech owls, kiosk construction, grass mowing, weeding and planting young trees in the Tract 18 shelter belt, conduct salinity tests in the Tract 11 impoundment, trash pickup on Lighthouse Road, copy (type) portions of the Hazardous Communication Plan to a Word Perfect file, help with the Darby Creek Cleanup at the Heinz NWR, and other assorted maintenance tasks.

May: Andrew McQuiston volunteered a total 176 hours for the month. Andrew mulched and weeded in the Tract 18 tree field, repaired equipment, assisted on building the new kiosk at the lighthouse, help with the capture of barn owls, banded screech owls with refuge staff and began the wood duck nest box check.

May 28: A luncheon was held for McQuiston at a local restaurant near Heinz Refuge. Refuge Manager Nugent presented McQuiston with a bird identification guide as a sign of appreciation for his volunteer time at the refuge.

May 30: McQuiston's last day of his 12-week SCA appointment.

### College Intern Program

January 23: Ford signed an agreement with the Richard Stockton College of New Jersey that formalizes an intern program on the Refuge. Tracey Stites, an undergrad majoring in Environmental Studies, will begin his internship on the Refuge February 3. Stites will initiate a species census of small mammals using a catch and release methodology. He will also assist with the wood duck nest box program, as well as miscellaneous maintenance projects associated with Refuge management. The internship will last for 13 weeks, 12 hours per week, and entitle Stites to 6 credits for completion of his degree at the end of this semester. Tracy will also have to write a comprehensive 20 page paper at the completion of his internship.

February 3: Ford gave Tracy Stites a tour of the Refuge to show him the different habitat types available for his small mammal species census work.

February: Stites volunteered a total of 50.5 hours in February. Stites assisted with the wood duck and blue bird box preparations, and began preliminary research on completing a small mammal survey for the Refuge. However, Stites and Refuge staff needed to alter Stites' work activities when he was effectively forbidden to do small mammal trapping for fear of contracting the Hantavirus. His biology college professor initiated a policy that terminated



small mammal trapping by all college students for that very reason. Stites contacted the Centers for Disease Control (CDC) to get their opinion on it. CDC said that they thought the chances of contracting the virus in this area and situation (outdoors) was extremely remote and provided him with information to support their statements. This was not enough however to sway the opinion of the professor. Therefore Stites will assist with more general bio-tech work, essential work never-the-less, but less fulfilling for a quality internship.

March: Tracy Stites worked a total of 61.5 hours in March. He worked with Linski in installing predator guards on wood duck boxes, and also on various maintenance tasks; Tract 18 road improvements and the fence work at the lighthouse.

April: Tracy Stites worked a total of 45 hours for the month, tasks included: planting trees in the Tract 18 shelter belt, banding screech owls, organizing the maintenance area, assisting with the woodcock survey, and installing predator guards on wood duck boxes. Tracy completed his internship at the Refuge on April 25. He will complete his finals the first week of May and receive a degree in Environmental Studies.

May 14: Ford wrote a letter to NJFG&W personnel that listed the duties completed by Tracy Stites. Stites, who recently completed his internship, is interviewing for a position with the department as an Conservation Officer, a question arose as to his biological qualifications/experience.

July 8: Jon Slusher, a new college intern from the Richard Stockton College of New Jersey, an undergrad majoring in Environmental Studies Intern began work at Supawna. He will be required to work 180 hours and write a paper to successfully complete his internship requirements. Assorted duties during the month included: placing rip rap, building ditch plugs, preparing the duck traps for preseason banding, painting hunting signs, and conducting outdoor environmental talks to youth groups with ROS Ford. Slusher worked a total of 94.5 hours for the month.

August: Jon Slusher conducted 24 hours of service this month. Jon placed materials at the site the ditch plugs in Tract 18, mowed in preparation for the upcoming lighthouse opening and worked on exterior improvements at the Tract 18 office.

September: Jonathan Slusher volunteered 76 hours during the month. He monitored the salinity levels in Tract 11 impoundment and tidal water, cleared the hunting safety zones in Tract 11d, monitored *Phragmites* spraying, assisted with a lighthouse opening, mowed in Tract 18, sorted and assembled field notes for the wood duck and screech owl file folders for the 97 season and assisted with daily maintenance as needed.

Jonathan completed his 180 hour internship on September 23 and received his B.S. in Environmental Studies from Stockton College on September 24. Jonathan plans on continuing volunteering each Monday throughout the upcoming winter.

November 18: DiDomizio sent a letter of recommendation for Jonathan Slusher to Plymouth

State College. Slusher is applying for their Graduate Studies Program.

## **7. Funding**

May 1: Ford presented Pennsville Township with their annual Revenue Sharing Check, in the amount of \$9,384 (72% of full payment), at their regular meeting. The check was up from the \$8,510 that was paid out last year, but still slightly less than what was paid out 2 years ago (\$9,986). Ford also took the opportunity to brief the Mayor and Committeemen on activities that have taken place on the refuge over the past year.

August 18: Ford provided the necessary forms to Pennsville Township for them to receive all future Revenue Sharing payments via an electronic transfer of funds. This was a directive from the WO to all field stations.

## **8. Safety**

January: DiDomizio, on the 23rd, and Ford on the 31st, completed their recertification for CPR/Rescue Breathing at the Heinz Refuge, instruction was given by Red Cross Certified instructor Leigh Zahm, Heinz NWR.

April 17: The abandoned well at Tract 18 was sealed and capped according to USDEP regulations. The work was done by D'Agostino Well Drilling, Inc., Bridgeton, NJ.

### Monthly Safety Meetings

January 29: Ford and DiDomizio attended the monthly safety meeting at the Heinz Refuge. The topic was about depression and suicide, led by Zahm, depressing in his own way. A 45 minute video about this topic was made available for anyone interested in viewing at home.

February 26: Ford and DiDomizio attended the safety meeting at the Heinz NWR. The meeting was chaired by ORP Burns, she presented a video and gave out a pamphlet that explained how to lessen the stress factor.

March 26: DiDomizio chaired the monthly safety meeting at the Heinz NWR. His topic was on anti-lock braking systems and was delivered by way of video. Ford and SCA McQuiston attended.

April 30: Ford chaired the monthly safety meeting at the Heinz NWR, a video titled Animal Awareness Driving was shown. DiDomizio and McQuiston attended.

May 21: DiDomizio and SCA McQuiston attended the safety meeting at Heinz Refuge. Chairperson Hayes presented a video on beating heat disorders.

June 25: DiDomizio and Ford attended the monthly safety meeting at the Heinz Refuge. Safety Chairperson Hughes showed a video about noise pollution and hearing safety.

July 24: DiDomizio and Slusher attended the safety meeting at Heinz refuge. Chairperson McMenamin presented a video on how to be prepared for natural disasters.

August 27: A review of the most recent safety items was done by all attenders prior to Chairman Nugent's video that depicted ongoing efforts to identify the cause of frog deformities in various parts of the country. One potential cause is thought to be environmental contaminants.

October 1: The monthly September safety meeting was held today due to scheduling conflicts in September. Chairperson Julie Roland (Heinz NWR) presented a video on ergonomics. Ergonomics deals with the proper positioning of the body during daily work routines and exercises to relieve stress on specific body parts that become tense while in the same position for long periods of time.

October 29: The monthly safety meeting was chaired by Tom Walker (Heinz NWR). Fact sheets on Hantavirus and Human Ehrlichiosis were handed out. The fact sheets dealt with history, type of infection and measures to prevent each illness.

November 21: DiDomizio attended the monthly safety meeting at Heinz Refuge. Chairperson Zahm demonstrated the proper use of a fire extinguisher.

December 19: DiDomizio attended the monthly safety meeting at Heinz Refuge.

## **9. Technical Assistance**

February 28: Ford was contacted by Phil Fancher, Chief Ranger, High Point State Park, seeking information on how the Refuge regulates deer hunting. The state park has a significant deer population and are exploring options that may be utilized by them to initiate a hunt to control the deer population. Ford provided Fancher with a copy of the Refuge's Deer Hunt Program.

March 5: Ford compiled information on the Refuge's hunting and trapping programs for a college student seeking information on population management.

### New Jersey Department of Environmental Protection

October 23: Larry Torok of the NJDEP requested that the refuge check the PSE&G transmission towers within the Killcohook area for osprey nesting activity. Torok is completing an environmental sensitivity report on the area. Gaine's Chemical Company is seeking a permit to expand a building 50' closer to Killcohook. DiDomizio conducted a survey and advised Torok that no osprey nesting was evident on the towers.

## 10. Other Items

March: Project Leader Nugent and Ford attended a premiere of a film titled "Down Jersey" at Cumberland County College, Vineland, NJ. The film was a 30-minute documentary of the cultural landscape of the New Jersey Coastal Heritage Trail in the Delsea region, comprised of the Delaware bayshore in Cape May, Cumberland, and Salem Counties. The Finns Point Rear Range Light is part of the Trail, however it wasn't featured in the film, apparently it was left on the cutting room floor. The Master of Ceremonies was Congressman Frank LoBiondo. Nugent and Ford made personal introductions to the Congressman and re-invited him to visit Supawna Meadows NWR. His previous attempt to visit was ultimately cancelled. Nugent presented him with lighthouse medallion as a reminder to visit when time allows.

July 18: Bruce Luebke, Cape May NWR, visited the Refuge and received a complete tour.

August 19: Project Leader Nugent and Ford gave an abbreviated tour of Supawna Meadows NWR to Congressman LoBiondo and Mary Harper, an aid. The tour began with the Finns Point Rear Range Light which offered an overall view of Refuge holdings and associated problems, i.e., *Phragmites* and Killcohook. He then was given a close-up view of Killcohook by way of a drive through the area. Nugent explained to him the history of area and how it is at the present time devoid of suitable habitat for most wildlife species; the problems associated with it, i.e., as a party spot for kids, a place to dump stolen vehicles, arson fires, it's continued use as dredge disposal site, and the Service's longstanding inability to relinquish it's secondary jurisdiction of the area. LoBiondo's office was recently contacted by the Township of Pennsville officials requesting an update from the USFWS as to its future plans for the 1,600 acre area. The Regional Director responded by stating that the USFWS was still intent in relinquishing its secondary jurisdiction in the troublesome area.

It appears that the Township would prefer to have the Service take over the primary ownership so that they would receive additional \$ via the Refuge Revenue Sharing Act.

The Congressman was also shown the recently completed ACE mitigation project on the Yerkes Tract. He seemed quite impressed with the number of wading birds observed using the restored wetlands. He then met Supawna's "Star Volunteer", Alex Linski, who volunteers 800+ hours/year to the Refuge. He was also given the opportunity to see the Refuge's maintenance facility and seasonal housing located at the Yerkes Tract before he was out of time.

Additional topics that were briefly touched upon during his short visit included the Refuge's efforts to control *Phragmites* and the need for additional exotic species control, history of land acquisition and the recently approved PPP for an enlarged acquisition boundary, development threats to the Refuge, the intern/volunteer program, and a couple examples of budget proposals/shortfalls.



(Photo: DiDomizio)

Volunteers can vote can't they Mr. Linski?

November 3: Previous Resident Manager Ford stopped in today to see the recent hydro-ax and feller bunching work done in Tract 11d.

November 14: DiDomizio was notified that he was selected to sit on the committee for the Spring 1999, maintenance conference. A six-member panel will meet several times to plan the event in the upcoming year and a half.

## F. HABITAT MANAGEMENT

### 2. Wetlands

The following figures are water levels and salinity measurements taken during the year from the Tract 11 impoundment:

<u>Date</u>	<u>Level at WCS</u>	<u>Salinity*</u>
01/01	2.72'	<2ppt
01/15	2.80'	<2ppt
02/01	2.50'	<2ppt
02/15	2.68'	<2ppt
03/01	2.70'	<2ppt
03/15	2.84'	<2ppt
04/01	2.98'	<2ppt
04/15	2.68'	<2ppt
05/01	2.78'	<2ppt
05/15	1.80'	<2ppt
06/01	2.16'	<2ppt
06/15	1.97'	<2ppt
07/01	1.80'	<2ppt
07/15	1.94'	<2ppt
08/01	1.80'	<2ppt
08/15	1.65'	3ppt
09/01	1.50'	<2ppt
09/15	1.50'	<2ppt
10/01	1.50'	3ppt
10/15	1.98'	4ppt
11/01	3.15'	3ppt
11/15	3.12'	5ppt
12/01	2.98'	<2ppt
12/15	3.10'	<2ppt

\* Salinity measurements taken from the central portion of the impoundment, shown in parts per thousand.

July 8 - 10: Slusher and Goode hand placed rip-rap in front of the Tract 11 WCS to try and eliminate a worsening erosion problem.

July 14 - 16: Refuge and volunteer staff built 2 ditch plugs in the Tract 11d area. The plugs were built in old ditches built many years ago by the mosquito commission to drain palustrine wetlands. The area is at present time susceptible to seasonal flooding and the plugs are expected to maintain this water for a slightly longer time frame.

**3. Forests-** July 7: Ford, Walker, and Sepik, Regional Woodcock Biologist, surveyed all the forest habitat to decide upon which areas would most benefit woodcock by being hydro-axed this fall. The axe is scheduled to be at Supawna from 10/7 - 11. Most of the areas selected to be cut were first cut 6 or 7 years ago.

September 26: The hydro-axe scheduled for the beginning of October was rescheduled to October 20.

October 20-24: Re-Cutting of the 6-year-old growth in Tract 11d was done with the Hydro-ax.

October 25: Cutting in Tract 11 with the Hydro-ax begins.

October 26: Hydro-axe has a major crack in a weld which puts the piece of equipment out of service for two days.

October 28-29: Feller buncher work begins with the Hydro-ax in Tract 11d.

October 30: Hydro-axe operator Jim Bohm returned to his duty station.

October 30: Repairs to the Hydro-axe, switching the main ax head to the feller buncher head and rescheduling of the operator which reduced his time here by two working days, resulted in failure to complete the Hydro-axe work scheduled for 1997. We will try to reschedule the Hydro-ax in 1998 to complete our regeneration objectives.

## **5. Grasslands**

January 21: The field around headquarters was mowed. The heavy rains throughout the summer and fall of 96 prevented the farm tractor from getting into the areas. Mowing proved to be easy after the recent cold snap, the tractor traveled over the frozen ground and water with no trouble.

June: Spot mowing in the Tract 18 field was done to help control Canada thistle.

July 10: Lower east field of Tract 18 was mowed. Several timely mowing's in the past years has helped to somewhat control the Canada thistle problem.

## **6. Other Habitats**

March: SCA McQuiston worked extensively on the shelter belt in Tract 18, near the Madole property. He weeded, mulched, repaired wire fencing (individual tree guards), and transplanted red cedar seedlings (found growing elsewhere on the Refuge) where previously planted seedlings died.

July 10: Volunteer Goode mowed the shelter belt area in Tract 18 which contains

approximately 260 trees ranging from 1 to 5 year old trees.

August 25: Mowing and weeding of the Tract 18 shelter belt was done by volunteer Michele Goode.

September 8: Tract 18 shelter belt was mowed and some of the 260 trees had weeding done around them.

**9. Fire Management-** April 17: The slip-on fire pumper was installed in the F-250 for the remainder of the Spring fire season.

#### **10. Pest Control**

July 10: Ford submitted a PUP to Project Leader Nugent for his signature and submission to the Regional Pest Management Coordinator.

July 21: Fannin approved the PUP for spraying 420 acres of *Phragmites* with Rodeo herbicide this September with an aircraft.

July 23: A 30-gallon drum of excess Rodeo herbicide was picked up from Bombay Hook NWR in DE. The herbicide was actually donated by Eastern Shore NWR; Bombay Hook NWR picked up 2 drums that were given away as surplus and allowed Supawna to take one so they didn't look greedy.

August 7 - 8: Final bid solicitations were received for Rodeo brand herbicide for *Phragmites* control this fall as well as bid proposals from prospective aerial applicators. The acquisition requests were forwarded to the Heinz Refuge for signature and then sent on to CGS. The low bid for Rodeo was \$88.90/gal. (ArborChem, Mechanicsburg, PA) and the low bid for application was \$9.25/acre (Downtown Aero Crop Service, Vineland, NJ), via a fixed-wing aircraft.

September 2: Access roads in Tracts 11,18 and 6 were sprayed with herbicide to control weeds.

September 7: DiDomizio transported seven 30 gallon drums of Rodeo to Downtown airport in Vineland, NJ. The Rodeo will be used for *Phragmites* control on the refuge by aerial spraying contracted to Vern Becker at Downtown.

Vern Becker along with his pilot conducted a preflight survey of the spray area around 11:00 am.

September 9,10,12: Aerial spraying of 420 acres of *Phragmites* south of Lighthouse road was completed.

September 12: Heinz Refuge received four 30 gallon drums of Rodeo for Supawna Meadows to use next year for *Phragmites* control in the fall of 98. Also, Heinz received 10 gallons of



Transline Herbicide for thistle control in Tract 18 fields in the spring of 98.



(Photo: DiDomizio)

Barn storming Phrag spraying, same thing!

## 11. Other

August 26: Biologist John Brady from the environmental branch of the U.S. Army Corp of Engineers requested to have a tour of the recent mitigation site and the refuge. Brady's main interest is wildlife management techniques being used in disturbed areas. Brady is trying to incorporate some of the techniques he is seeing into the proposed projects for the disposal areas of the Delaware River main channel deepening project. Brady is preparing the supplemental environmental impact statement for the project.

## G. WILDLIFE

### 1. Wildlife Diversity

#### Christmas Bird Count

February 25: The Refuge received the 1996 Christmas Bird Count compilation from Sheryl Forte. Forte did the annual count on December 22, 1996. The area monitored for the various bird species consists of the Refuge and the immediate area surrounding the Refuge. The following data is an account of the species observed and includes the total count of that species observed.

<u>Species</u>	<u>#</u>	<u>Species</u>	<u>#</u>
Double-crested Cormorant	2	Great Blue Heron	2
Canada Geese	37	Snow Geese	5350
Mallard	6	Black Duck	8
Goldeneye	1	Bufflehead	4
Common Merganser	1	Ruddy Duck	2
Turkey Vulture	2	Northern Harrier	3
Sharp-shinned Hawk	1	Red-shouldered Hawk	1
Red-tailed Hawk	5	American Kestrel	1
Virginia Rail	1	American Woodcock	1
Ring-billed Gull	85	Herring Gull	50
Great Black-backed Gull	50	Rock Dove	30
Mourning Dove	275	Eastern Screech Owl	1
Great Horned Owl	3	Belted Kingfisher	3
Red-bellied Woodpecker	2	Downy Woodpecker	8
Hairy Woodpecker	1	Northern Flicker	6
Blue Jay	13	American Crow	3500
Fish Crow	500	Carolina Chickadee	31
Tufted Titmouse	12	White-breasted Nuthatch	1
Marsh Wren	1	Golden-crowned Kinglet	6
American Robin	52	Gray Catbird	1
Northern Mockingbird	5	Yellow-rumped Warbler	14
American Pipit	1	Cedar Waxwing	20
European Starling	375	Northern Cardinal	12
American Tree Sparrow	9	Field Sparrow	3
Savannah Sparrow	6	Song Sparrow	36
Swamp Sparrow	2	White-throated Sparrow	118
Dark-eyed Junco	168	Red-wing Blackbird	550
Snow Bunting	32	Eastern Meadowlark	16
Common Grackle	40	Brown-headed Cowbird	15
House Finch	29	American Goldfinch	60
House Sparrow	25		

A total of 61 different species were located on and adjacent to the refuge (54 species in 95 and only 50 species in 94), 94 species were found in Salem County (89 species in 95 and 93 species in 94). This was the third year in a row that the number of species found on or adjacent to the Refuge has increased. While the weather in December 94 was exceptionally mild, the same can't be said for December 95, it was harsh, making it difficult to explain the increase. And the weather during the 96 count was seasonable, but the winter season as a whole has been the mildest in recent memory.

Several species worth special mention, due to the fact that they were found nowhere else in Salem County, are: Virginia Rail, Marsh Wren, American Woodcock, and Goldeneye. The Red-shouldered hawk was 1 of only 3 seen in the county.

December 20: The Christmas bird count was conducted by Sheryl Forte, NAJ, New Jersey Chapter; her day's tally is unknown at the time of this writing.

## **2. Endangered and/or Threatened Species**

February: A NJ state listed threatened species, the Northern Harrier has shown signs of possible nesting activity in the Tract 18 fields.

June 12: DiDomizio, and Drew and Stacey McQuiston observed an adult and an immature bald eagle while checking wood duck boxes in Tract 11d.

August 26: A mature and immature bald eagle were observed in the Tract 18 mitigation area, site A pond.

October: Bald eagle sightings are far fewer this month than in the past month. Part of the reason is duck hunting in the areas of previous sightings and that refuge staff haven't been in the areas where the eagles were seen as much this month. An immature eagle was observed perched on the PSE&G tower closest to the Salem on Oct. 11th... opening day of New Jersey's 1997-98 Waterfowl hunt season.

## **3. Waterfowl**

January 29 - 31: Large flocks of snow geese have been seen flying over the Refuge during the early morning hours. They are the first snow geese to be seen in the area in many weeks.

February: 110 wood duck boxes were prepared for the upcoming nesting season by DiDomizio, Linski and Stites. Several boxes were moved this year to more desirable/accessible locations.

July 25: 5 Mallards were released in the Tract 18 site C mitigation area. The mallards were abandoned in early spring and brought to Tri-State Bird Rescue in Delaware for rehabilitation. The mallards had apparently been following around a pet cat for several weeks prior to being taken to Tri-State. The cat and mallards made the local paper and even had their picture in the Philadelphia Inquirer's, New Jersey section.



(Photo: DiDomizio)

Or you can trade what you've already won for what's  
behind door number 3

### Waterfowl observations (incidental)

#### Tract 11 Impoundment:

February 20: 42 pintail, 14 mallards, 6 black ducks.

February 21: 14 pintail, 10 mallards, 2 black ducks, and 740 Canada geese.

March 1: 22 pintail, 8 black duck, 12 mallards, and 6 Canada geese.

March 15: 570 pintail, 18 green-winged teal, 14 mallard, and 4 Canada geese.

Tract 18, Mitigation site C:

February 21: 22 green winged teal, 2 mallards and 2 Canada geese.

September: Daily sightings of Canada geese, blue-winged teal, mallards, and black ducks were observed throughout the month in Goose Pond and Tract 100.

#### **4. Marsh and Water Birds**

September: Tract 18 mitigation area is beaming with heron and egret use all month long.

#### **5. Shorebirds, Gulls, Terns and Allied Species**

February: Woodcock have been heard peenting in the field near Headquarters for most of the month.

April 21: The annual woodcock survey was completed by DiDomizio, McQuiston, Stites, and Ford. Both routes were run simultaneously; the Supawna Road/Lighthouse Road route failed to turn up any birds, the Ft. Mott Road/Tract 11d route gave up 5 birds.

May 9: A Killdeer's nest of 4 eggs was removed from the ACE's mitigation project by Ford. The contractor notified him that an unknown bird nest was located in an area needing excavation.

#### **6. Raptors**

January: Northern harriers, red tailed hawks, and kestrels have been seen hunting in the Tract 18 fields on a daily basis, essentially the entire month.

February: Thirteen screech owls were found while preparing the wood duck boxes for the upcoming nesting season, 7 red phase and 6 gray phase. While 13 owls were counted, it is unknown if any were counted twice, since the owls were not marked, some may have moved to other boxes after being counted the first time. The Refuge has initiated plans to band the owls in the future to better determine their population and their utilization of nesting boxes.

It should also be mentioned that Refuge staff have long suspected the screech owls of having a preference for blue jay in their diet, based on the large amount of blue jay feathers found in many of the boxes. The feathers were usually not found in a box occupied by a screech owl, but signs pointed to the owl as the responsible party. DiDomizio recently discovered a screech owl perched on a decapitated blue jay, while preparing a wood duck box, for conclusive proof.

March 22: Ford retrieved a baby great horned owl, about 1½ weeks old, from a residential area in Elsinboro Township. It was a very windy day and had been apparently blown out of it's nest. Ford kept it over night and fed it ground hamburger, it was picked up by NJ

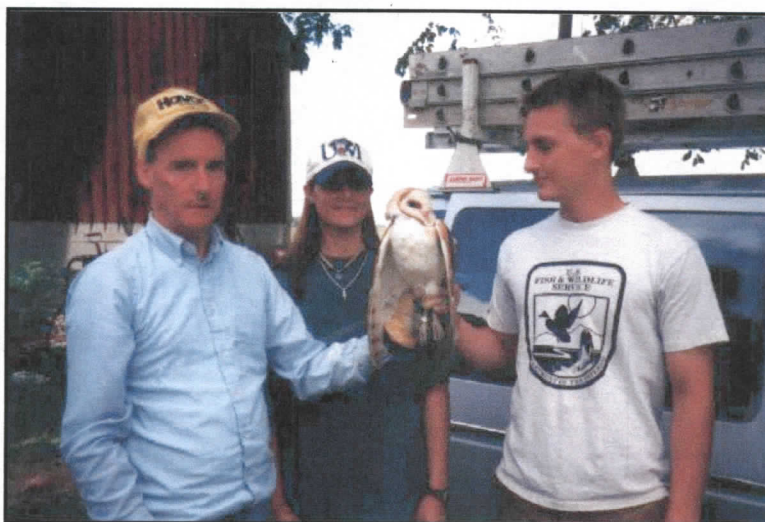


Conservation Officer Cascioli the next day and delivered to a nearby wildlife rehabilitator.

April 12: Ford retrieved a red-tailed hawk from a yard in Elsinboro Township, injuries were unknown but it was severely emaciated. It was delivered to Tri-State Bird Rescue for diagnosis and treatment.

May 18: Dr. Bruce Colvin, Barn Owl Research Foundation, inspected the barn owl nest box on the Yerkes Tract for nesting activity, there was none. This was the first box that he and his associates checked and, therefore, he was unable to say if the lack of activity was related to late nesting activity observed at other known nest sites. If the box remains inactive throughout the remainder of the year, it will be only the third time since 1980. The previous 2 times were in 1981 and 1983. The Foundation will be back to check the box in late June.

May 27: Refuge staff and 2 volunteers assisted with the capture of a male and female barn owl with Dr. Colvin and his associate on the Freas farm which is adjacent to Tract 11.



(Photo: DiDomizio)

And the winner of the barn owl look alike contest is?

August 18: The Refuge received word from a local citizen that he found what he thought was a dead eagle. Ford investigated and found a dead red-tailed hawk. The bird was severely decomposed and laying at the base of an electric pole that held a transformer. The wire leaving the top of the transformer was bare and the suspected cause of the birds demise. Ford contacted Atlantic Electric to report his find and ask if they could insulate the wire to prevent future electrocutions. Atlantic Electric said that they would inspect the transformer and take appropriate action if needed.

September 30: DiDomizio and volunteer Linski spotted a peregrine falcon in the meadows around Goose Pond.

September: Frequent sightings of a mature and immature bald eagle together were observed throughout the month in Tract 18 and Tract 11. Typically bald eagles are only observed occasionally on the refuge, maybe only once every two to three months in the past.

October: Tract 18 has several northern harriers, red-tailed hawks and kestrels using the grassland portions.

November: Again, this month the Tract 18 grassland fields are teeming with red tailed hawks, kestrels and Northern harriers.

## **7. Other Migratory Birds**

January: A winter flock of eastern meadowlark has maintained a presence throughout the month in the Tract 18 grass fields.

March 18: The first swallow of the season was seen in Tract 18, the species was thought to be that of a tree swallow.

May 8: Ford retrieved an injured catbird from Ft. Mott State Park. The bird's lower bill was almost sheared off and dangling by a little remaining tissue. The injury was probably a result of flying into a wire. It was trying to eat bread from people's hands with it's remnant upper bill, obviously with little success. It was caught and removed from the park before being euthanized.

## **8. Game Mammals**

April 30: A red fox den was located in the middle of the grass field in Tract 18. There were 4 pups observed at the den, located in the same place as last year's den.

June 5: Whitetail does with fawn have been seen using the Tract 18 fields on a daily basis.

November: Deer are abundant in the Tract 18 fields still. However, the deer are usually in the safety zone out of harm's way of the archery hunters.

November 3: The local newspaper had an article that stated, "Salem County had over 400 dead deer picked up on the roadways in a two week period". Supawna Meadows is located in Salem County.

## **10. Other Resident Wildlife**

January: The Tract 18 fields have had several coveys of quail in them throughout the month.

## 15. Animal Control

June 15: Refuge neighbor Paul Sheer contacted the Refuge to seek information on how to obtain a depredation permit from the State of NJ to control a deer problem. Ford provided him with the necessary phone numbers and told him what little he knew about the depredation permit process. Sheer said that more than 40 deer have been counted at one time eating the string beans that are planted in the field located between Lighthouse and Supawna Roads.

June 30: Refuge neighbor Nick Mesioignes, and neighbor to Sheer, paid the Refuge a visit to complain (in no uncertain terms) about his neighbor killing all the deer he's been trying to feed and protect over the years. He admitted that he knew it wasn't a problem that he expected the Refuge to solve, he just needed to vent his anger at somebody.

## 16. Marking and Banding

April 7: Ford and Stites banded 6 screech owls. The owls were captured from previously identified wood duck nesting boxes with significant screech owl use. Banding the birds will enable Refuge staff to determine longevity and home range/mobility.

April 11: Stites and McQuiston banded 1 additional screech owl.

May 13: Refuge staff banded 13 screech owlets that were being raised in wood duck boxes. The number of young in each box ranged from 2 to 5. This brings the total of screech owls banded this year to 20.



(Photo: DiDomizio)

They promised this was a quiet  
neighborhood



June 23: DiDomizio and Refuge Volunteers D. McQuiston, S. McQuiston, and M. Goode helped State Biologist Ted Nichols and his crew band Canada geese off Refuge. A total of 725 geese were caught, 216 were goslings, more than 300 were of unbanded after-hatch-year age group, and the rest were previously banded birds.



(Photo: DiDomizio)

### The true meaning of "Getting Goosed"

August 11: Duck traps in tract 11d were placed out. Trapping will begin in September.

November 3: A confusion trap and two floating duck traps located in Tract 11d were brought in, washed and put away.

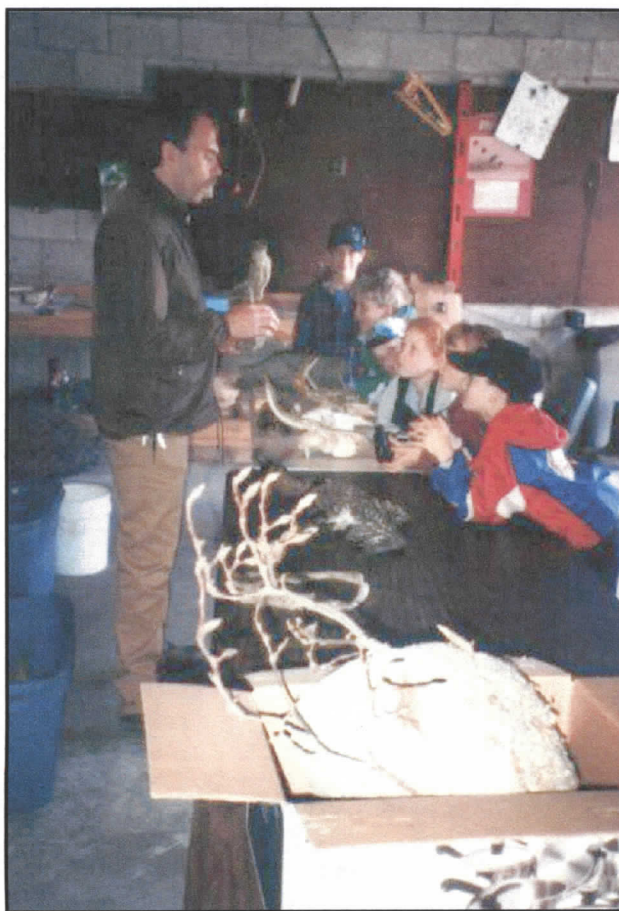
## H. PUBLIC USE

### 1. General

November 3: Project Leader Nugent responded to a letter from Linda Turi, PH.D. on birding opportunities on Supawna Meadows. Nugent noted to her that the refuge is relatively new and public use activities are pretty much limited to hunting but arrangements can be made if needed. He also explained that the refuge has limited staff which doesn't allow for daily public use as of yet.

### 6. Interpretive Exhibits/Demonstrations

May: Ford gave wildlife ecology/environmental talks to approximately 245 school kids, primarily 3rd graders, during the month. The program utilizes mounted animals, feathers, turtle shells, skulls, antlers, etc.. The lighthouse is what attracts them to the Refuge, but based on comments and thank you letters received, it is safe to assume that the wildlife talk is the highlight.



(Photo: DiDomizio)

Web of life? World-wide web? Now that you  
mention it!

June 26 - 27: Ford and DiDomizio created a large aerial photo exhibit of the Refuge to be used at the Heinz 25th Anniversary celebration, and at other public functions, like the annual Septemberfest.

September 6: An exhibit for the Fish and Wildlife Service was displayed in Pennsville Park by Ford and DiDomizio for Pennsville Township's annual Septemberfest.

## **7. Other Interpretive Programs**

March: Asst. Manager Ford presented a program about the Service and the Refuge System to 38 members of the Pennsville Republican's Club. He took the opportunity to brief them on the administration's position on HR 511 and HR 512. His talk was well received and appreciated by the members.

June 16: Asst. Manager Ford presented a program about migratory birds to 5 members, and 3 mothers, from Cub Scout Pack 215, Pennsville, NJ.

## **8. Hunting**

### White-tailed Deer

January 12: The Refuge was open for scouting to all deer hunters scheduled to hunt during the last 2 segments of the 96-97 deer hunt. Morning temperatures were on the chilly side, 16 degrees was recorded at 8 am. Many hunters were apparently reluctant to leave their warm beds, only 3 vehicles were observed in the designated parking areas. By noon the number of vehicles in the lots had increased to 10. One group reported seeing 30 - 40 deer in several small herds in Tract 11d (X-mas Tree Lane area).

January 16 - 18: Opening day for segment 3 of the 96-97 deer hunt started out very wet, a soaking rain persisted from first light until mid-morning. There was a potential for a total of 20 (permitted) hunters participating in this hunt, 13 vehicles were counted in the designated parking areas. All hunters got wet, very few hunters got a deer, 4 deer are thought to have been taken.

Day 2 was dry but bitterly cold, temperatures in the low teens with a wind chill of minus 20 degrees. At 7:30 am there were 9 vehicles in the parking areas and by 9 am there were only 3 vehicles left. Another day of poor hunter success.

Day 3's weather hadn't improved but the hunters seemed more determined to stick it out, it was the last day for the segment. There were again 13 vehicles using the lots, even at 10:30 am, when in days past they were nearly deserted. Hunter success seemed improved with their added determination, although actual numbers were not available.

January 21: Ford spoke with Andrew Burnett, Senior Big Game Biologist, NJDEP, Division of Fish, Game, and Wildlife. Preliminary harvest figures for the 96 archery season and the

first 2 segments of the 96-97 shotgun season were: 18 deer for bow hunters, 20 deer for the shotgun hunters. He was unable to provide a breakdown as to their age and sex. That data will be available at a later date. This confirms what was suspected, harvest numbers are considerably less than previous years. This was to be expected, fewer permits were issued (lack of hunter interest?), and poor weather conditions during the previous hunt segments.

January 23 - 25: The fourth and final segment of the 96-97 deer hunt came and went with barely a ripple. While the weather was considerably more tolerable, there was only 7 permitted hunters for the segment. It is thought that actual hunter participation was much less, a maximum of 3 vehicles was observed at any one time during the 3-day hunt, no hunter contacts were made by Refuge staff.

January 24: The Duck and Goose sign at the Penn Salem Marina was removed. The sign had hunting information and brochures for the 96-97 season.

January 27: Deer hunting signs and trash cans were removed from the three designated parking lots for the deer hunt.

March 12: (omitted from the March Monthly Activities Report) Final harvest results of the 1996-97 deer hunt were received from the NJFG&W, Bureau of Wildlife Management.

1996-97	<u>Permit Bow</u>	<u>Permit Shotgun</u>	<u>Total</u>
Antlered	9	8	17
<u>Antlerless</u>	9	30	<u>29</u>
<b>Total</b>	<b>18</b>	<b>38</b>	<b>56</b>

1996-97	<u># Permits</u>	<u>Total Success Rate</u>	<u>Antlerless Success Rate</u>
Archery	35	51.4%	25.7%
Shotgun	60	63.3%	50.0%

The shotgun harvest was greater than expected. The season had fewer permit holders (88 permits issued last season) and the hunters had unfavorable weather conditions to contend with during much of the season. The previous season's totals follow for comparison purposes:

1995-96	<u>Permit Bow</u>	<u>Permit Shotgun</u>	<u>Total</u>
Antlered	11	11	22
<u>Antlerless</u>	16	24	<u>40</u>
<b>Total</b>	<b>27</b>	<b>35</b>	<b>62</b>

April 4: Draft NJ State Deer Hunt Regulations for Zone 59 (Supawna Meadows NWR) were received from the State's Bureau of Wildlife Management Office.

May 12: Andy Burnett, NJFG&W, Bureau of Wildlife Management, was notified of the Refuge deer hunter orientation dates, they are: Archery - October 26, 1997 and Shotgun November 30, 1997.

Scouting will be permitted on those days and also on January 11, 1998.

August 8: The parking area for deer hunters off X-mas Tree Lane had several loads of stone leveled and smoothed to improve it for the upcoming hunting season. The stone was removed from the temporary access roads that had been in use by the ACE contractors doing the mitigation work in Tract 11d.

September 3,4,9: Safety zones in Tract 11d were cleared of overhanging brush and marked with orange paint and fluorescent orange ribbon.

September 16,17,30: Duck and goose hunting areas in Goose Pond were checked for proper signing as to where it is legal to hunt within the refuge boundary. Several signs were replaced and additional signs were placed to better identify the hunting area.

September 30: The states waterfowl hunting regulation brochures was received at the refuge, approximately 100 brochures.

October 20: Assistant Manager Walker (Heinz NWR.) received the successful candidates names for the 1997-98 archery and shotgun deer hunting season from Paulette Nelson of the NJ Fish and Game and Wildlife office. Walker immediately sent out notices to the 35 chosen archery hunters since the required refuge orientation for the archery hunters is to be held on October 26.

October 22: Walker sent out the shotgun permit notices to 59 successful candidates, 100 permits were available. The mandatory shotgun hunting orientation will be held November 30, 1997. Due to an additional week of purchasing permits this year, the additional 41 left over permits will be available for one week instead of the 1 day as they have been in the past several years.

October 26: The mandatory archery hunting orientation was held. Assistant Manager Walker and Maintenance worker DiDomizio conducted the session. A NJ state hunter education instructor talked about the importance of a good safety harness and general safety rules associated with archery hunting. State Conservation Officer Cascioli was also on hand to answer questions.

October 29: A press release for deer hunting dates and the sale of left over permits was submitted to the "Today's Sunbeam" newspaper.

November 1-29: Archery deer hunting on refuge is open to 34 hunters. The season is closed on Sundays however.

November: Nugent, Walker and DiDomizio have coordinated often this month for the preparation of the upcoming shotgun orientation.

November 3: The local paper "Today's Sunbeam" listed the deer hunting dates for the archery and shotgun deer seasons.

November 28: The storage building next to the lighthouse was set up for the hunting orientation for November 30.

November 30: Project Leader Nugent (Heinz Refuge), DiDomizio and NJ State Hunter Education Instructor Don Wilkinson conducted the mandatory shotgun deer hunting orientation and hunting segment lottery for the 97-98 deer season. Also, State Conservation Officer Mike Cascioli was on hand to answer law enforcement questions and issues.

December 4: DiDomizio conducted a make-up orientation session for shotgun deer hunters who missed the original shotgun hunting session.

December 5: DiDomizio and Linski placed "NO HUNTING ZONE" signs along the Tract 18 boundary. The signs replaced those which were "mysteriously" taken down during the archery season.

December: 8,9,10: The first segment of the refuge shotgun deer season took place. 25 hunters were selected for this segment hunt.

December: 18,19,20: The second segment of the shotgun deer season was held, this time 18 hunters were in the field. The refuge shotgun deer season will continue into January 1998, for 6 days, 2 segments consisting of 3 days each.

### Waterfowl

October 11-25: Duck and Snow goose hunting in the "Goose Pond" section of Tract 11 is open.

## **9. Fishing**

March: Dip netting for glass eels (baby American eels) has been a nightly activity for many people in the area. The tidal waters of the Refuge (upper end of Goose Pond) that flow under Lighthouse Road has been active most nights. Their activity has been monitored by Conservation Officers from NJFGW. While the eelers on Lighthouse Road have not posed a problem, other locations have had gunplay by people "defending" their territory from late comers. It's much like the California gold rush days, the little eels sell for \$375/lb.. A catch of 2 lbs./night is fairly common.



## **10. Trapping**

January 1: The Refuge trapping season opened to muskrat. Trapping is taking place in Tract 100, and is being done by Richard Finlaw. Finlaw submitted a winning bid of \$500.00.

February 28: The Refuge has received 2 muskrat trapping reports from Richard Finlaw. Report #1 was for 1/1/97 - 1/16/97, it stated that 500 muskrats were taken. Report #2 was for 2/4/97 - 2/11/97, an additional 100 muskrats were taken. It's obvious that these numbers aren't completely accurate, but they are an accurate approximation. Finlaw also traps a large portion of Mannington Meadows that is adjacent to Tract 100, the Refuge area he is trapping. The muskrat trapping season will end on March 15.

March 21: The Refuge received the final trapping report from Richard Finlaw for March 3 - 13; 175 muskrats were caught, for a seasonal total of 775. Finlaw said that he made a little money this year, but he had expected to catch nearly 2,000 muskrats based on the number of houses in the area, so he was a little disappointed.

August 8: The Annual trapping Program was revised and forwarded to the Heinz NWR for signature.

October 29: Press release to advertise the muskrat trapping on the refuge was sent out today by Walker.

October 31: "Today's Sunbeam" ran the trapping press release today.

November 28: Three trappers have shown interest in trapping muskrat on the two refuge sites. Sealed bids will be opened on December 12, 1997 for the trapping rites for the season.

December 12: Today is the last day for the refuge to accept sealed bids for muskrat trapping on the refuge for the 97'-98' season. Muskrat trapping bids for units 3a and 14 were opened at the refuge headquarters. A single bid of \$500. was received for unit 14 and no bids for the unit 3 was received; the sole/winning bid was that of Richard Finlaw of Pennsville, NJ.

## **16. Other Non-Wildlife Oriented Recreation**

### Finns Point Rear Range Light

March 10: A press release was sent to Today's Sunbeam. As a result, two short notices were published at two different times.

March 17: Ford, DiDomizio, and McQuiston gave an environmental talk and lighthouse tour to 13 cub scouts and 6 adult chaperons from Pennsville, NJ.

April 8: Refuge staff, Linski, McQuiston, and 2 Lighthouse volunteers cleaned the lighthouse in preparation for the first open house of the season.

April 20: The first open house of the 1997 season had 117 visitors and received \$29.12 in donations. The weather was near perfect while visitation was about average.

May 1: The Bridgeton Middle School (8th grade) visited the lighthouse with one class of 25 students and 6 chaperons.

May 2: Another 8th grade class from the Bridgeton Middle School visited the light. This class consisted of 16 students and 4 chaperons.

May 16: The 3rd grade from Valley Park School, Pennsville, visited the lighthouse. Fifty four students and about 16 chaperons were present.

May 18: The monthly open house was poorly attended, even though the weather was quite pleasant, sunny and 70 degrees. Only 86 visitors were recorded, that was the least attended May on record. The previous low attendance was 124 in 1996, the high was 209 in 1994. The donation jar collected \$26.86.

May 21: The Marie D. Durand Elementary School, Vineland, paid a visit to the lighthouse with their entire 3rd grade class; approximately 150 students and about 30 chaperons. The previously mentioned class trips were allowed to go to the top of the lighthouse, in addition to receiving a short history lesson about the light, and a wildlife ecology lesson on local wildlife. The size of the class, and their limited amount of time, prevented them from going to the top of the lighthouse to view the surrounding countryside. They were each given a drawing of the lighthouse, suitable for coloring, which also gave the open house schedule for the remainder of the year.



(Photo: DiDomizio)

Volunteer Betty Husarik sheds some light on how the prism lens worked



June 3: David Shaw from the Star Ledger newspaper interviewed DiDomizio via phone about the history of the lighthouse. Shaw is writing an article on NJ lighthouse's, the article will appear in the Ticket section of the paper on Friday June 13, 1997.

June 15: The monthly open house received 116 visitors and collected \$30.85 in donations.

July 15: The NJ State Aquarium Day Care facility sent 46 kids, K - 8th grade, and 14 chaperons and councilors to visit the light. They were divided up into 6 smaller groups according to age (to avoid over crowding at the top of the light), and then rotated to additional stations that included a historical perspective of the light and an environmental lesson on local wildlife and habitat. All of the kids were from the Camden inner-city area and had little or no previous exposure to wildlife. They were familiar with rats and cats and little else, the only birds they said they heard in the mornings was crowing roosters. It is hoped then that this was a worthy and memorable experience for them.

July 17: The NJ State Aquarium Day Care sent another group of kids from the Camden area to see the light. This group was composed of 54 kids, K - 8th grade, and 15 chaperons and councilors. The group received the same instruction and activities as the previous group.

July 20: The monthly open house had 97 visitors during the 4 hours it was open. Five volunteers staffed the lighthouse, and \$46.25 was collected in donations.

August 17: The monthly open house received 60 visitors and collected \$35.00 in donations.

September 13: A special opening of the lighthouse was held to go along with the Fort Mott State Park Celebration Day. A bus from the park was used to shuttle people to the lighthouse, 162 people visited the lighthouse during the 6 hours it was open. Assistant Manager Ford from Eastern Neck NWR worked here for the event.

September 21: The monthly open house had 102 visitors during the 4 hours it was open.

October 19: The scheduled open house for the month was cancelled due to rain.

November 26: DiDomizio coordinated with 4 volunteers to give a historical talk on the lighthouse to 40 boy scouts and their chaperons. The scouts will be in December 13, 1997.

December 13: A special opening for the lighthouse was held for 24 scouts and parents. Four volunteers spoke to the scouts on the history of the lighthouse, it's function at the time it was in operation as well allowing them to climb to the top to view the refuge, surrounding farmlands and the Delaware River.

December 18: Louis Presti from the New Jersey Network would like to add the lighthouse to a documentary being done on lighthouse's of New Jersey. Mr. Presti will furnish further information on the type of interview needed and how the lighthouse will be used in the documentary in January of 1998.

## **17. Law Enforcement**

January 19: Both Refuge mailboxes' were discovered to have been stolen during the previous night. This had also occurred on December 5, and the boxes were found by Pennsville Township employees about a mile from their original location. The boxes were not significantly damaged, so they were re-erected. This time however the boxes were not to be found. Ford made an extensive search of all the local roads. It was obvious that the crime was directed towards the Refuge as not a single other mailbox in the area was targeted either time. The problem was reported to the local police department.

March 3: Ford completed the required physical exam for law enforcement and firefighting duties.

March 29: Ford provided LE coverage at the Heinz Refuge. A feeble attempt at arson was discovered on the Long Hook Creek foot bridge, no monetary damage. A reported 25,000 gallon raw sewage spill from a ruptured 8" line near the Tinicum Township sewage treatment plant was investigated. It was rumored that much of the spill had entered Long Hook Creek, no evidence of contamination was found. The pipe was being repaired when Ford investigated.

April 14 - 18: Refuge Officer Ford attended the 1996 Annual Law Enforcement Refresher at Patuxent NWR, Laurel, MD.

April 20: Ford discovered a recent illegal campfire near the water control structure at the Tract 11 impoundment. Refuge neighbor Stan Kite flagged Ford down when he was exiting the area to report that he seen a 4-wheel ATV leaving the impoundment the previous night. He said it looked like a "fat guy" operating the machine, no other description was available as it was quite dark and the ATV operator shut off the lights when he reached Supawna Road.

April 27: Ford provided LE coverage at the Heinz NWR. No violations were encountered. Pennsville doesn't have a rural delivery service.

April 25: The Refuge became the recipient of 4 very old and damaged footstones from unknown origins. The only visible markings on the stones are initials. The stones came from Refuge neighbors, Alan and Nina Bradley. They were given to the Refuge with little explanation, just that they were laying around for a long time and they thought that the stones belonged to the cemetery located on the Yerkes Tract.

May 7: Ford did a little more investigation about the stones and questioned Alan Bradley further. He finally admitted that his kids brought them home from places unknown, approximately 20 years ago. His kids are now grown and have moved away, but he's sure that they didn't intentionally steal them from a cemetery, that they were just found lying on the ground someplace.

May 16: Ford notified the Pennsville Police Department about the stones. The officer that

Ford spoke with knew the Bradley "kids" and would investigate further. He was going to check cemetery vandalism police reports that occurred approximately 20 years ago. One set of initials that Ford pointed out to the officer was "W. M.", which could possibly stand for William Mecum. The Mecum family lives near the Bradley home, a distinct possibility if they had a family plot on the property.

May 21: Mary Ann, the daughter to the late Jim Mecum, told DiDomizio that she was contacted by the Pennsville Police Department. They asked her about the possibility of the stones coming from the Mecum property, apparently due to comments made by Ford regarding the initials "W. M.". She said that she remembers being shown a cemetery plot on the property when she was a little girl. Now she has no idea where it was and the location may be lost now that Jim has died.

June 28 - 30: Ford assisted with LE/security responsibilities at the Heinz NWR's 25th Anniversary celebration. On 6/28 he helped with directing traffic and other miscellaneous LE duties. The night of 6/29 he pulled the graveyard shift security detail to ensure no vandalism occurred to the large tents still in place from the anniversary's festivities.

July 11: Refuge patrol roads were mowed.

August 15: Ford participated with LE personnel from the Heinz NWR to go over procedures for proper utilization of surveillance equipment recently acquired. Some of the equipment may be instrumental in the apprehension of individuals suspected of hunting out of season on Supawna.

September 16: The lights on the 2 boat trailers for Heinz and Supawna Refuges' were repaired.

### Deer Hunt

January: Law enforcement patrols were conducted during the 6 days of shotgun deer hunting, with assistance from the Heinz staff on 2 days, no violations were encountered.

This season's deer hunt appears to have been the least troublesome in several years. No shooting violations were reported, no theft of property was reported, only 1 report of a Refuge hunter trespassing (after the fact) on private property, and only 1 argument between hunters was reported, again after the fact. One would like to think that the lack of violations is due to the hunter safety sessions being conducted every year, it could be because there were fewer hunters this year to make the violations.

September 14,28: Refuge law enforcement officers from Heinz Refuge assisted by a State Conservation Officer worked the Tract 11 area where deer poaching is suspected.

October 4: Refuge Officer Walker patrolled the upland portions of the refuge. The state archery season opened but the refuge season is closed.

November 1: Officer Zahm patrolled Supawna Meadows during the afternoon and evening hours, as part of the refuge's archery hunt. Zahm contacted nine hunters and personally observed three deer taken (a four point, a spike, and a doe). No violations were detected or incidents reported.

November 15: Officer Zahm patrolled Supawna Meadows during the morning hours and as part of the refuge's archery hunt. Zahm contacted six hunters and it is estimated there to be between 12 and 14 hunters on the refuge. One small button buck was observed harvested. One hunter reported of another hunter using mechanical advantage to maintain a draw on their bow. This possible violation of state law was observed during the first few days of the refuge's archery season. Otherwise, no other incidents were reported and no violations detected.

November 17: Nugent checked a 5-point buck taken by an archer close to the Yerkes Farm... just before sunset.

December 8,9,10,18,19,20: Heinz Refuge Officers McMenamin, Zahm, and Nugent patrolled the refuge during the first and second segment of the refuge shotgun deer season. (Supawna Meadows doesn't have any law enforcement personnel at this time). Emphasis was placed on patrolling the refuge's safety zones and checking hunters for the proper state license and permits to hunt on the refuge.

### Waterfowl Hunting

October 11: Nugent and McMenamin checked seven waterfowl hunting parties, in or close to Goose Pond, during the opening day of the 97-98 Waterfowl Hunt Season. Some twenty hunters were checked with no known violations noted. Average bag was 1 bird/hunter... ranging from zilch to five.

October 25: Refuge Officer McMenamin and NJ Division of Fish, Game and Wildlife Conservation Officer Casscioli patrolled the waterfowl hunting area. Three violations were noted. One individual will receive citations for hunting without a Federal Duck Stamp and hunting without a NJ waterfowl hunting stamp. Another individual will receive a citation for possession of a loaded firearm in a boat under power.

## I. EQUIPMENT AND FACILITIES

### 1. New Construction

February 4: The rural delivery mailbox at HQ was replaced, it was stolen on January 19. DiDomizio, with assistance from the Heinz NWR Maintenance staff, fabricated a heavy duty, vandal resistant, mailbox with plate steel.

July 17: Linski fabricated a dolly to be used for off season storage of the refuge fire pumper.

#### Kiosk

March 28: DiDomizio and McQuiston staked out the site for the new kiosk.

April: A large informational kiosk has been under construction there during much of the month. When completed, the visiting public will have access to brochures about the lighthouse and the Refuge via a self-serve display. The kiosk was funded in FY96 and purchased from Wilderness Graphics.

May: The informational kiosk at the lighthouse is essentially complete, only permanent displays are missing. Temporary ones will be used until the development and acquisition of permanent displays is completed. The old kiosk was removed on May 15.

June 5: Displays for the new kiosk were put in place.

June 10: The old kiosk was removed.

June 13: The new kiosk was painted.



(Photo: DiDomizio)

I thought the announcement said skill using roller blades!

## Refuge Entrance Sign

April 23: The large "entrance" sign that has been in storage for several years was finally erected near the lighthouse.



(Photo: DiDomizio)

I hope they spelled it right?

## **2. Rehabilitation**

February 20: DiDomizio repaired the Tract 18 bar gate. It was damaged by the ACE's contractor last summer, and the contractor was to make the needed repairs. However, due to the circumstances surrounding the project, the Refuge gave up hope and repaired the gate themselves.

November 5,6: Volunteer Linski and Slusher replaced the roof on the observation blind in Tract 11 and also repaired the floor and the side walls.

November 24: The doors to the fuel storage building were replaced.

November 26, 27: Linski and Slusher added new lighting in the storage building next the lighthouse. The lights were excess property from the local state park.

December 1: The new overhead fluorescent lighting system in the storage building was completed.

December 8,9: The shallow well pump in Yerke's house, Tract 18 was insulated and heat lamps added to help prevent freeze-up during the winter months.

### **3. Major Maintenance**

January 14: Bell Atlantic repaired the outside phone lines to the Tract 18 maintenance office.

January 30: Galvanized structures to surround the refuges two mailboxes were made at the Heinz refuge. The enclosures will hopefully lessen the damage (disappearance too) being inflicted to the boxes lately.

February 7: The 15' bat-wing mower was winterized and placed in storage.

March 6: DiDomizio replaced a worn brake line on the Dodge Dakota.

March 7, 18, & 25: DiDomizio, Ford, Linski, Stites, and McQuiston made road repairs to the Tract 18 entrance road. The previous ACE contractor left a large pile of stone material for the Refuge. The dump truck from the Heinz NWR was essential in the task, approximately 50 - 60 loads were hauled away, this effort used the entire pile.

March 11 - 12: DiDomizio, Linski, McQuiston, and Stites rerouted and shortened the chain link fence surrounding the lighthouse. This was done to accommodate the new Refuge sign that will be erected soon.

March 24: DiDomizio did an engine oil and filter change, and a lube job, on the Case 1394 tractor.

April 21 & 24: DiDomizio and Linski prepared the lawn mowers for the season.

May 5: Power wires running to the winch on the Dodge Dakota were replaced.

May 5: Refuge staff repaired a neighbor's fence next to Tract 11. Heavy limbs from several refuge black cherry trees had done the damage.

May 21: The refuge entrance gate located on the Mecum property was relocated back onto refuge property.

June 10: Ford flushed the rain gutters at Refuge Headquarters/residence, using the slip-on fire engine to simplify the task.

June 20: The 15' batwing mower had a complete lube job.

June 24: Worn out pulley's to the Tract 100 garage door were replaced.

July 1: The thermostat was replaced on the Case 1394 tractor.

August 4: The Case 1394 farm tractor had its 100 hour service completed.



August 13: Ford, Volunteer McQuiston, and Regina (SCA Intern from Heinz), pruned the Tract 11d patrol road.

September 24: Volunteer Alex Linski repaired the 16' aluminum boat that had several rivets missing from the stern. Linski has built several boats and also taught the local boat shop personnel how to repair aluminum boats.

October 6: The small engine equipment used on the refuge was winterized.

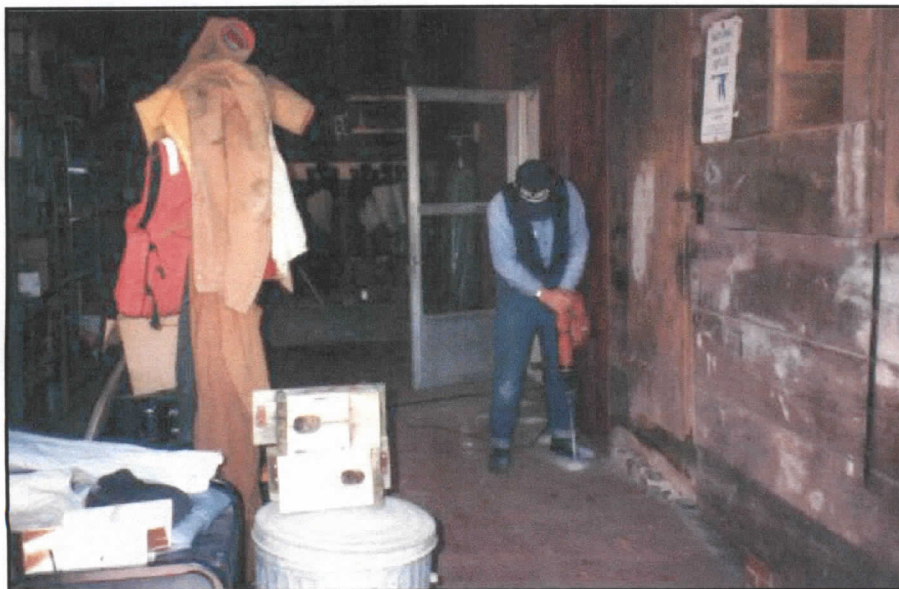
October 9: The Case 1394 tractor wiring to the starter was repaired.

November 4: The 15' bat-winged mower was set up on the Case 1394 tractor.

### Maintenance Office

January 14: The termite contractor for the Tract 18 maintenance building phoned to say the work will be done around mid-March, due the extreme high water table. State laws prohibit the use of the chemicals needed for termite control until the water table is below a certain depth.

March 24 - 25: The Tract 18 maintenance building/volunteer housing was treated for termites. An infestation was discovered FY96 but was delayed until now due to climatic and budgetary reasons. The termite damage was local in nature and temporary measures were taken last year to halt their spread. This treatment was comprehensive in nature and should protect the entire building for several years.



(Photo: DiDomizio)

And we thought the termites were destructive



#### **4. Equipment Utilization and Replacement**

The Heinz Refuge has loaned Supawna an excess Dodge Ram 150. The pick-up will be used by the volunteers at the refuge.

#### **5. Communications Systems**

March 29: A new telephone answering machine was purchased for headquarters. The old machine quit working properly after many years of faithful service.

#### **6. Computer Systems**

April 1: The viral protection update for FPROT was installed in the headquarter's computer.

April 9: The Refuge received word that it will be the recipient of a new computer, courtesy of the RO. It will be a Micron 486 computer with a pentium processor, 17" screen, CD Rom, internal modem, tape backup, and Windows 95.

May 6: The new Micron computer, purchased by the RO, was delivered to the Refuge.

June 9: The new Micron computer was set up for operations at Refuge Headquarters. It is sharing at the present time counter space designed for only one computer. Once all the necessary software, including cc Mail mobile is installed, the old Swan 486 computer will be transferred to the Heinz NWR.

June 13: Most of the software was installed on the new computer by ROS Ford. Tina Steblein was contacted to see when the new cc Mail software could be installed, she was hopeful that she could do it the week of 6/23.

June 23: Steblein notified Ford that she would not be able to install cc Mail that week as she did not have the programs in hand to install.

July 3: Word Perfect 5.1 was installed on the new Micron computer.

July 18: Tina Marie Steblein installed cc:Mail Mobile on the new Micron computer.

August: The ccmil system on the new 586 computer has been a royal pain for nearly the entire month. The Manager has spent countless hours on the phone with in-house and out-of-house technical specialists trying to solve the problem. The system (the internal modem) may have finally had the bugs worked out on 8/22, mail retrieval finally became a possibility. More time will be needed to see if the system continues to function as it was intended.

November 7: The telephone lines to the Tract 18 office was knocked down during high wind and rain storm.

November 12: The telephone company replaced the wires to the Tract 18 office.

December 23-30: A problem with CC:mail being retrieved keeps occurring.

**8. Other-** March 31: A spring snowstorm caused a local power outage at Yerkes during the evening hours. Atlantic Electric was not able to respond until the next morning, a breaker on the power line had popped for unknown reasons. The SCA Interns were without water and lights, but most of the heat is provided by gas heaters not dependant on electricity.

## **J. OTHER ITEMS**

### **3. Items of Interest**

April 21: The Refuge has heard from numerous sources that all residents of Pennsville Township with a Salem mailing address will soon be changing it to Pennsville. Ford called the Salem Post Office to inquire about the rumor. Word is that the change will occur on May 10. Notification was the responsibility of Pennsville Township, they were the party responsible for initiating the change. Notification has been hit-and-miss it would seem, Volunteer Linski was never notified as well.

May 10: An update to last month's mention of the pending address change. It was determined that the Refuge and Linski wasn't notified because the township used the property tax listing when making their mailing list. The new address change for the Refuge, effective today, changes the address to: Pennsville, NJ 08070. However, the mail is still being delivered by a rural carrier out of the Salem Post Office.

May 9: William Reese, caretaker of the nearby Finns Point National Cemetery, was brutally murdered at the cemetery by suspected cross-country murderer, Andrew Cunanan. Bill was killed execution style, one shot to the head, and his vehicle taken. His wife went looking for him when he didn't come home for supper. She enlisted the help of the police when she couldn't find him in the caretaker's house. His body was found in the basement, the only place the wife failed to look for him.

Refuge staff were not close friends with Bill, he was however, a familiar face, so the murder was still a shock to them. The murder investigation is being conducted by the FBI, Salem County Prosecutor's Office, and the Pennsville Police Department. There is a nation-wide search for Cunanan, he is suspected of at least 3 other murders; 2 in Minnesota and 1 in Chicago.

#### 1998 Bell Atlantic Phone Book Solicitation

December 1: Supawna Meadows NWR was contacted by Media Ventures, Norwalk, Conn., to submit a photo of the refuge for inclusion into Bell Atlantic's phone book for Salem County, N.J. (This was not a first-time request... Supawna Meadow NWR's historic Finns Point Rear Range Lighthouse has been featured in Bell's phone book for several years.) An aerial photo taken by Michael Allegro was offered to Media Ventures; the representative photo showed the multi-habitats found within the 2,600 acre refuge, i.e., tidal marsh croplands, woodlots, rivers creeks and the three newly-created mitigation tidal pools.

**K. FEEDBACK**

“God put me on Earth to accomplish a certain number of things. Right now I’m so far behind I will never die.”

- Author Unknown, but likely a Service employee